REPORT TO CONGRESS

THE RELATIONSHIP OF MEDICARE PPS TO ALL PAYER SYSTEMS AND COST-SHIFTING

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- 1. Actuarial note 85-01, "Exploding The Cost-shifting Myth" (8 Pages).
- 2. May 30, 1986 OIG Report - Financial Impact of the Prospective Payment System on Medicare Participating Hospitals - 1984 (31 Pages).
- 3. Uwe E. Reinhardt, Ph.D., untitled article, Health Care Financing Review, 1985 Annual Supplement (pp. 105-110).
- 4. Excerpts from Health Care Financial Measurement Association Task Force on Uncompensated Services, April 5, 1985 Exposure Draft, "Definition and Financing of Uncompensated Services" (5 selected Pages).

THE RELATIONSHIP OF MEDICARE PPS TO ALL PAYER SYSTEMS AND COST SHIFTING

EXECUTIVE SUMMARY

Background

When the Medicare Prospective Payment System (PPS) legislation (Title VI of the Social Security Amendments of 1983) was being considered, concerns were expressed by private health insurers and others that Medicare's PPS could result in a phenomenon whereby any Medicare savings would be offset by higher cost to non-Medicare patients and ultimately to their insurance programs.

Since 1981, for example, the Health Insurance Association of America (HIAA) has reported on studies which led them to advocate, through a national advertising campaign, that all States develop "All-Payer" systems for payment of hospitals, presumably to avoid cost shifting under PPS type partial payer payment systems.

In order to determine the validity of these concerns, the Congress mandated in Section 603(a)(2)(C)(iv) of P.L. 98-21 that the Secretary report on: "The feasibility and desirability of applying the payment methodology under such section to payment by all payers for inpatient hospital services."

Section 603(a)(2)(C) further states:

"Such report shall specifically include, with respect to the item described in

clause (iv), consideration of the extent of cost shifting to non-Federal payors and the impact of such cost-shifting on health insurance costs and premiums borne by employers and employees."

It should be recognized that "cost shifting" is a very complex phenomenon. The insurance industry has argued that hospitals that have revenue shortfalls, due to inadequate payments from public programs, shift the shortfall to patients having private insurance, which pays billed charges. In reality, such shortfalls can occur for a variety of reasons. In turn, hospital behavioral responses also vary widely. Besides "inadequate public program payments," shortfalls arise through bad debts, charity, nonpatient care deficits, market declines, cost inefficiencies, bad investments, and other untoward experiences. Congress, through this Report's mandate, has asked the Department of Health and Human Services (DHHS) to focus on the issue of the adequacy of PPS payments. "Uncompensated Care" is the subject of a separate Congressional study mandate; thus, this report focuses on the relationship of PPS payments to hospitals' costs and subsequent changing behavior.

Description of Source Documents

Two studies were commissioned to provide input to this report:

(1) The Feasibility of Extending Medicare PPS to All Payers - This study explores State innovations in prospective payment methodology and demonstrates the extent to which PPS' diagnosis related groups (DRGs) and PPS' payment methods are appropriate for others or all payers.

(2) The Impact of All-Payer Regulations on Cost Shifting - In this study an analysis was made of the extent to which hospitals had a "need" to shift costs due to high portions of uncollected billings and the extent to which these hospitals actually used higher "mark-ups" to commercially insured patients as a means to recover those costs.

In addition, the HCFA Office of the Actuary (OACT) developed an actuarial note, "Exploding the Cost-Shifting Myth." This study and a very recent Office of the Inspector General (OIG) Report on hospitals' profits are referenced in the discussions which conclude this report. A recent article by Uwe Reinhardt, Ph.D. and a draft statement from the Hospital Financial Management Association Task Force on Uncompensated Services are also cited.

STUDY FINDINGS

The Feasibility of Extending Medicare's PPS to All Payers

An extensive review was made of the Medicaid, Blue Cross and OCHAMPUS systems that use DRG payments. This review found that most States and private users made substantial alterations in the Medicare PPS formula. Those which did not, apparently used Medicare's formula because they lacked sufficient data to refine it. The types of changes employed involved recalculation of cost weights, different methods for establishing rates, different peer groupings, outlier definitions, exempt institutions, special cost treatments, and transfer policies.

The analysis concludes that a straightforward extension of Medicare's PPS to all-payers, without major modifications, would not now be desirable.

- Use of Medicare prices by all payers would likely result in substantial increases in amounts other payers pay for certain cases.

- Use of Medicare relative weights for all payers would substantially alter the amount paid by other payers for a substantial number of cases.

- Other payers' programs frequently use different approaches and measures for establishing DRG rates and for defining, among other things, hospital peer groupings, case outliers, capital and medical education costs, and transfer policies.

These adaptations collectively suggest that the Medicare payment methodology is not widely viewed as appropriate for use by all payers. The observed alterations to PPS represent responses to the unique political and environmental circumstances encountered by each payer.

The Impact Of All-Payer/Partial-Payer Regulations On Cost Shifting

The cost shifting analysis is based on a study of AHA survey data from a sample of hospitals. It compares their apparent "need" to cost-shift with their actual changes in mark-ups to commercially insured patients in seven regulated States (Connecticut, Maryland, Massachusetts, New Jersey, New York, Washington and Wisconsin) versus those in nonregulated States in 1980 versus 1982. Need to "cost shift" is an index based upon each hospital's:

- Uncompensated care (charity and bad debt);
- Margins from treatment of Medicare, Medicaid, and Blue Cross inpatients; and
- Nonpatient care revenues.

The index is a rough measure of how much cost a hospital would have to shift to commercially insured patient charges to eliminate a shortfall in hospital revenues.

Between 1980 and 1982, sample hospital margins declined from 3.0 percent to 2.0 percent in the regulated States, but rose slightly, from 5.5 percent to 5.7 percent, in unregulated States. However, this study found little evidence of widespread cost shifting in this pre-PPS period. Unregulated hospitals were found no more likely to exhibit an increased need to cost shift than regulated hospitals. Among the hospitals in regulated States showing increased need to cost shift, admissions grew by 3.5 percent compared to 0.8 percent in comparable nonregulated hospitals, and outpatient revenues were increased from 0.3 percent to 3.2 percent of total revenue. Nonpatient care revenues declined similarly in regulated and unregulated States among hospitals with increased "needs" to cost shift.

The point is made that "needs to cost shift can and do arise for reasons other than shortfalls in the rates paid by public payers"; the primary reason identified by HIAA. Although the study confirmed a belief that hospital markups of charges over costs increase at a significantly lower rate in States where commercial payments for hospital care are regulated, all-payer systems were not superior to partial-payer systems on the basis of either greater cost containment or lower amounts of cost shifting. The chapter also provides further data showing that, from 1980 to 1985, Medicare's share of total hospital revenues continued to grow, and is an unlikely "cause" for cost shifting behavior.

This study concludes that hospitals use a variety of means to increase net revenues and do not necessarily practice "cost shifting" of the kind alleged by commercial insurance spokespersons. Alternative means used to enhance revenues include increasing admissions, increasing outpatient services, otherwise increasing net revenues, and changing nonpatient care revenues. Cost-shifting "needs" and practices do not appear to be related to the form of State hospital payment regulation.

Discussion

In addition to the results from the three studies commissioned to support this report, there are several other papers and findings which bear on this report's key questions.

HCFA's OACT Note 85-01, "Exploding the Cost Shifting Myth," questions several premises of HIAA estimates of the extent of cost shifting. It points out:

1) Community hospitals' total revenues have exceeded total expenses in every year since 1974 and are growing. Patient revenue alone has exceeded all hospital expenses since 1980 and is likewise growing.

2) During the years from 1970 to 1984, the Medicare share of hospital expenses increased by 2.3 percent per year. During the same time period, the Medicare share of inpatient hospital days increased by only 1.8 percent annually.

3) The Medicare cost/charge ratios used by the HIAA are outdated.

Professor Uwe Reinhardt, in a paper developed for the special edition of the Health Care Financing Review commemorating 20 years of Medicare and Medicaid, points out that Medicare's share of the nation's health bill has increased each year. To him, this suggests a "reverse cost shifting," insofar as providers have found it easier to increase their Medicare revenue shares than their revenues from other sources.

Perhaps the clearest evidence on the cost-shifting issue for PPS came in a May 30, OIG report - "Financial Impact of the Prospective Payment System on Medicare Participating Hospitals - 1984." That report confirmed earlier AHA estimates that about 4 out of 5 hospitals earned sizable profits in 1984 and showed that, among 2,099 Medicare PPS hospitals studied, the average profit rate was about 15 percent of Medicare reimbursements, a rate equivalent to a return on investment of over 25 percent.

In addition to these studies, which individually and collectively show that Medicare is paying at least its fair share of costs for caring for Medicare inpatients, there are numerous indications which arguably suggest that other payers may have benefitted from the behavioral changes stimulated by the introduction of Medicare's PPS. The Federal Employee Health Benefits program experienced remarkable declines in hospital use in 1984 among most plans of all types, such that premium decreases for 1985's "open season" were common, as are refunds in light of the unexpectedly favorable 1984-85 experience. Similar experiences are reported in many areas of the private health insurance sector. Information reported by the Blue Cross and Blue Shield Association showed decreasing utilization and lower cost growth trends occurred almost everywhere in 1984. Estimates from the 1984 national health expenditures calculations suggest that the growth in hospital benefit payments of private health insurance from 1983 to 1984 was less than 3 percent, the smallest growth in two decades. Thus, it is unlikely that Medicare's PPS had any adverse affect upon private health insurance costs and benefits. In fact, the widespread profitability of Medicare PPS has obviated the cost-shifting issue for the vast majority of hospitals.

There is also evidence that the support for "all-payer" systems is waning. Massachusetts and New York have not requested continuations of their Medicare waivers. Also, a recent "exposure draft" issued by the Hospital Financial Management Association Task Force on Uncompensated Services states, "All payer systems are undesirable or inappropriate in many, if not most, circumstances." This adds weight to a conclusion that it is not desirable for all payers for inpatient hospital care to apply the Medicare PPS methodology. Indeed, these anecdotes, when coupled with the findings of this study's commissioned papers, argue for continuation of pluralistic competitive approaches to third party payment for inpatient hospital services, and against the notion that all payers should employ Medicare PPS.

In conclusion, this report's findings clearly support the conclusions that:

- It would be neither feasible nor desirable for all payers for inpatient hospital care to apply the Medicare PPS methodology.

- Medicare's PPS has not resulted in cost shifting that could be said to have increased health insurance costs and premiums borne by employers and employees. In fact, there are indications that the behavioral changes which PPS stimulated have lessened the growth in health insurance costs and premiums borne by employers and employees.

CHAPTER I

INTRODUCTION

*Lawrence Bartlett, Director, Health Systems Research, Inc., Washington, D.C., contributed much toward this chapter, as a contractor to the Brandeis University Health Policy Center.

Introduction

In 1982 and 1983, the Medicare program experienced its most significant changes since its passage in 1965. In an effort to bring rapidly rising costs under control, the Federal Government reformed the way Medicare pays for inpatient hospital care. The program shifted from a retrospective, cost-based reimbursement system to one that determines in advance how much the program will pay for hospital care. This new Medicare prospective payment system (PPS) establishes a specific price per admission for each type of case a hospital is likely to treat. The Medicare case classification system seeks to group together cases that are expected to consume similar levels of resources and, therefore, result in comparable costs to the hospitals. This classification system is called the diagnosis related group or DRG system.

In addition to establishing the Medicare DRG PPS, the Social Security Act of 1983 (P.L. 98-21) also mandated that the U.S. Department of Health and Human Services (DHHS) conduct a number of studies relating to the Medicare PPS. Among the studies called for by Congress was one that would examine "the feasibility and desirability of applying the payment methodology under such section [PPS] to payment by all payers for inpatient hospital services." The legislation also requested that the study include "consideration of the extent of cost shifting to non-Federal payers and the impact of such cost shifting on health insurance costs and premiums borne by employers and employees."

Interest in enacting some form of mandatory all-payer regulation at the Federal or State level appears closely linked to a number of factors, including: the perceived seriousness of the cost and equity problems in the health care sector, the success other approaches have had in addressing these problems, and the prevailing philosophical view of the role Government should play in the private health care marketplace.

In the late 1970's and early 1980's, when health care costs were skyrocketing, several States with relatively strong regulatory traditions adopted all-payer systems in an effort to stem the tide of rising costs. In other States, individual payers took steps to control costs. For example, in April 1982, only 14 State Medicaid programs used prospective reimbursement systems to pay for inpatient hospital care. By November 1984, 33 Medicaid programs were using such systems. A number of Blue Cross plans have also adopted prospective payment systems. Ten of these plans are expected to operate DRG-based systems for some or all of their member hospitals by the end of 1985. While these prospective systems are similar in that they establish payment levels in advance, the design and the incentives across these programs may differ substantially. For example, some systems pay on a per diem basis, thus providing incentives for hospitals to increase reimbursement by keeping patients longer. Others establish a fixed price per discharge, thereby providing an incentive for hospitals to reduce length of stay.

During the period of rising costs, individual payers also became increasingly involved in cost-conscious alternative delivery arrangements such as health maintenance organizations (HMOs) and preferred provider organizations (PPOs).

By the end of 1984, a total of 16.7 million persons were enrolled in HMOs nationwide, a 20 percent increase over the previous year. In early 1985, Blue Cross/Blue Shield plans operated preferred provider plans in 24 States, compared to only 8 States a year earlier. This report also speaks to reasons the all-payer systems may not be desired or wanted.

Recent data indicate that these pluralistic efforts, coupled with the decline in the overall inflation rate, may have helped moderate the growth in health care costs. Although during the period 1980-1984 health care spending continued to rise, annual rates of growth declined from a high of 15.3 percent in 1980 to 9.1 percent in 1984, the lowest real annual increase in the past 20 years. Yet, some would still advocate all-payer regulations over pluralistic approaches. To some, overall cost concerns have not been the only reason for advocating all-payer regulation. The issues of uncompensated care and equity across payers also are cited as reasons for considering all-payer approaches. With larger payers establishing tighter reimbursement systems and discount-oriented delivery arrangements, hospitals are faced with a reduced number of patients across whom the cost of charity care and expenses not covered by discount rates can be spread. Payers with smaller market shares--including the commercial insurers--complain of having to pay more than their fair share to compensate for the costs not covered by, or discounts provided to, larger payers. The commercial insurers--individually and through their trade association, HIAA--have been among the strongest supporters of all-payer legislation, although a number of these companies are now developing their own PPOs and other alternative delivery arrangements.

An important issue to be addressed is whether the current movement toward more competitively oriented market strategies by individual payers represents a promising approach for achieving long-term efficiency and equity in the delivery and financing of inpatient hospital services. This, in turn, raises the question about the role of the Federal Government. Should it act as any other payer and concentrate on controlling expenditures for the Medicare population through PPS? Or should it have a broader role in the health care marketplace, attempting to standardize rates to providers, control costs for all payers, and improve equity across payers through the establishment of some form of all-payer regulation?

To more adequately address this broad question, a series of more specific questions are raised and addressed in this report. They are:

1. Is the Medicare PPS an appropriate model for an all-payer system?

   The feasibility of extending the Medicare PPS methodology to all payers is explored in Chapter II of this report. The features of PPS and the four State "All-Payer" systems initially waivered from PPS are described, as are features of other payers' DRG-based payment systems. The issues associated with the PPS price levels and relative weights are discussed, as are the data and administrative issues associated with extending the development of weights based upon a general population rather than the predominantly elderly Medicare population. The policies of the DRG-based prospective payment systems developed by other payers are contrasted with those of Medicare to highlight the range of design options for a DRG-based prospective payment system for all payers.

2. Do all-payer systems reduce cost shifting across payers?

The extent to which cost shifting across payers is reduced in States with all-payer regulation is examined in Chapter III. The results of a multivariate analysis of changes from 1980 to 1982 in commercial mark-ups in response to financial need are presented. The analysis uses data from a sample of hospitals in both regulated and nonregulated States.

Finally, the findings presented in these chapters must be viewed against the backdrop of a rapidly changing health care market. Solutions that may have worked several years ago may not be appropriate either today or for a very different marketplace several years from now. Chapter IV, the last chapter of this report, discusses the answers to the key policy questions within the context of our dynamic health care delivery system.

CHAPTER II

THE FEASIBILITY OF EXTENDING PPS TO ALL PAYERS

*Lawrence Bartlett, Director, Health Systems Research, Inc., Washington, D.C., provided much of the empirical information for this Chapter, under a subcontract to the Brandeis University Health Policy Center. Dr. Bartlett was assisted by Alan Golden. Susan S. Laudicina of the Urban Institute developed the descriptions of the four "waivered" All-Payer Systems.

II. The Feasibility Of Extending PPS To All Payers

This chapter begins with a descriptive review of the features of Medicare's PPS with key features of the four State "All-Payer" Systems which initially received waivers from PPS. Next, attention is focused upon the use of Medicare PPS methods in developing State, governmental and private processes. The chapter ends with an appraisal of the feasibility of using all payers versus Medicare's PPS methods.

Key Features of the Initially Waivered States' All-Payer Systems.

Upon initial examination, Medicare's system of payment for inpatient hospital services furnished to its beneficiaries bears some resemblance to the four State all-payer systems of Maryland, Massachusetts, New Jersey, and New York which were originally waivered from PPS. Both Medicare and the States impose mandatory regulations on all short-stay, acute-care community hospitals in their jurisdictions. All of these systems are prospective in nature; that is, they all determine allowable reimbursement levels in advance of the rendering of services and such payment is not subject to an end-of-year retroactive reversion to actual expenditures. In addition, they all offer hospital providers the same broad set of incentives: facilities whose costs exceed allowable payment ceilings face a loss of funds, while facilities which manage to hold their costs below target levels are rewarded by retaining savings.

It is precisely this system of economic rewards and penalties which distinguished the prospective payment systems under discussion from the traditional, retrospective systems that they have replaced. Retrospective, cost-based reimbursement had been widely criticized on the grounds that it lacked

incentives to contain costs, as whatever a hospital spends can be passed along to third party payers. The prospective systems to be considered here all share a common belief that their programs offer the right mix of incentives and disincentives to promote the following goals: 1) contain the rate of increase in the cost of inpatient hospital services without impairing the quality of care; 2) encourage improved hospital management and efficiency; and 3) provide soundly managed institutions with sufficient revenue to meet financial requirements that result from providing care consistent with community needs.

However similar their philosophical underpinnings might be, the contrasts between Medicare PPS and the originally waivered four all-payer States are varied and often significant. To begin, Medicare reimbursement regulations affect only inpatient services provided to aged and disabled public beneficiaries and contribute only about one-third of a hospital's revenues on average. By definition, New York and Massachusetts were, and New Jersey and Maryland are, all-payer States that have authority over all classes of patients, public and private, and that control virtually 100 percent of hospital inpatient revenues.

The following sections will explore specific program features of Federal and State prospective payment systems and analyze the differences among them. Table 1 summarizes these characteristics for PPS and the originally four waivered States. Table 1 contrasts Medicare PPS with each of the four all-payer States waivered at PPS's inception with respect to key variables: (A) methodology used in calculating rates prospectively; (B) unit of payment for hospital providers; (C) hospital classification system; and (D) reimbursement ceilings or upper limits. Although Massachusetts and New York did not request renewal of their waiver, the

Table II-1 Comparison of Medicare PPS with All-Payer State Systems

	TYPE OF SYSTEM	PAYMENT UNIT	"PEER GROUPING	REIMBURSEMENT CEILING	INFLATION ADJUSTMENT	VOLUME/ OCCUPANCY ADJUSTMENT	PROVISION FOR UNCOMPENSATED CARE	CASE MIX ADJUSTMENT	ADJ. FOR TEACHING ACTIVITY
Medicare PPS	Mandatory, prospective reimbursement system. Pays fixed rate per DRG plus add-ons for outliers.	Case per discharge	20 "groupings": 2 national, split urban/ rural; 18 regional, split urban/rural.	Pays average rate per case by DRG. Blends hospital-specific average with regional/ natl. averages in declining proportions.	Uses DRI Natl. Hospital Market Basket; no retroactive adjustments.	None	None	Employs overall case mix system.	Direct passed through, indirect by adjustment factor.
Maryland	Mandatory, prospective dual reimbursement system: Guaranteed Inpatient Revenue (GIR) or Inflation Adjustment System (IAS).	GIR hospitals get case per discharge; IAS hospitals get % increase to fixed rates.	Not widely used.	GIR method pays hospital-specific average case per diagnostic category; IAS payment is final.	Uses Maryland developed index; allows retroactive adj. for actual costs.	Pays variable costs for increases; fixed costs for decreases; ratio is 50/50.	Projects "reasonable" amount for each hospital.	GIR hospitals on case mix system	Indirect
*Massachusetts	Mandatory, prospective reimbursement system. Sets annual cap on each hospital's allowable revenues.	Charges	None	Each hospital receives "maximum allowable cost" in base year; increased for inflation, reduced by productivity factor.	Uses modified DRI Natl. Market Basket; allows retroactive adj. for actual costs.	Combined adj. for volume/case mix changes pays variable costs of 50% for increases, 50% for decreases exceeding corridor.	All payers contribute; private payers guarantee coverage for most charity care.	Combined adj. for volume/case mix changes.	None
New Jersey	Mandatory, prospective reinbursement system. Separate DRG prices set for each hospital.	Case per discharge	3 groups: teaching; minor teaching; non-teaching.	Pays average rate per case by DRG. Blends hospital-specific average with group average.	Uses modified DRI Natl. Hosp. Market Basket; allows retroactive adj. for actual costs.	Partially volume variable; pays variable/ fixed costs on sliding scale.	All payers contribute to full payment for all uncompensated care.	Employs overall case mix system; plus combined volume/intensity adjustment.	Direct
*New York	Mandatory, prospective reimbursement system. Sets annual cap on each hospital's allowable revenues.	Per diem for routine costs/ RCC for ancillary costs.	Each hospital "seed clustered" to be at center of its own group.	Limits ancillary costs to 105% of peer group mean; applies routine/ LOS ceiling set at 107.5% of peer group mean.	Uses N.Y.-developed index; allows retroactive adj. for actual costs.	Pays variable costs for increases; fixed costs for decreases on sliding scale. Minimum occupancy requirements by bed type.	All Payers contribute to regional pools for bad debt/ charity care.	Automatic case mix adj. used in calculating initial rate.	Indirect

* No longer "All-Payer"

features of their former systems are presented as historical information.

The more significant differences between Medicare PPS and the all-payer States may be summarized as follows:

New Jersey

- Sets per-case payment amounts by DRG; blends hospital-specific average costs with group-specific average depending on the variability of the case. Medicare DRG payment rates have declining percentage attributable to hospital-specific costs;

- Classifies hospitals into one of three statewide groups-- Medicare classifies hospitals into two national peer groups and 13 regional peer groups;

- Uses a modified version of Medicare market basket; allows retroactive adjustments if actual inflation is greater--Medicare PPS makes no retroactive adjustments;

- Is partially volume variable; pays variable/fixed costs on a sliding scale--Medicare PPS rates are not volume variable;

- Recognizes uncompensated care as an allowable cost--Medicare does not.

Maryland

- Guaranteed Inpatient Revenue (GIR) system establishes a per-case payment amount based on each hospital's historical cost experience--Medicare PPS gives progressively less weight to hospital-specific costs;

- Individual patients charged for actual services used--Medicare pays a per-case amount;

- Employs State-derived factor price index to project inflation in hospital goods and services; allows retroactive adjustment if actual inflation is greater--Medicare PPS makes no retroactive adjustment;

- Adds a 1 percent intensity factor to reimbursements for hospital growth and technology--Medicare considers productivity each year when updating PPS payment amounts;

- Adjusts rates for changes in volume by paying only variable costs for increase over projected levels, and fixed costs for decreased--Medicare PPS rates are not volume variable;

- Recognizes uncompensated care as an allowable cost--Medicare does not.

Massachusetts

- Set prospective annual cap on each hospital's total inpatient care revenues; each payer contributed to a facility's allowable revenue based on its share of charges--Medicare's unit of payment is the DRG, plus add-ons;

- Each hospital's budget was based entirely on its historical cost experience; there was no peer grouping system-- Medicare PPS gives progressively less weight to hospital-specific costs;

- Used a modified version of Medicare market basket; allowed retroactive adjustments if actual inflation is greater--Medicare PPS makes no retroactive adjustment;

- Reduced trended amounts by 2 percent per year to encourage productivity--Medicare considers productivity each year in updating PPS payment amounts;

- Adjusted rates for changes in volume through combined volume/case mix adjustments; payed variable costs for increases, fixed costs for decreases exceeding a corridor--Medicare PPS rates are not volume variable;

- Recognized charity care as an allowable cost--Medicare does not.

New York

- Set a prospective annual cap on each hospital's total inpatient care revenues; employed a per diem prospective payment based mainly on two factors: per diem limits for routine costs, and per case-type (DRG) limits for ancillary costs--Medicare's unit of payment is the DRG plus add-ons;

- "Seed clustered" each hospital to be at center of its own group with other hospitals gathered around it--Medicare classifies hospitals into two fixed national peer groups and 18 fixed regional peer groups;

- Set separate ceilings on routine and ancillary costs based on deviation from peer group mean--Medicare PPS pays blended average per case amount for each DRG;

- Employed State-derived factor price index to project hospital inflation; allowed retroactive adjustments if actual inflation is greater--Medicare PPS makes no retroactive adjustment;

- Added 2 percent (3 percent for public general hospitals) discretionary allowance whose use is restricted to nonoperating items--Medicare has no such explicit provision.

- Adjusted rates for changes in projected volume levels and projected occupancy levels--Medicare PPS rates do not;

- Recognized one-half of bad debts and charity care as an allowable cost--Medicare does not.

Current Status of Waivers

The April 1986 status of the waivers originally extended to these four State systems when Medicare's PPS was implemented is described below.

Maryland

HCFA approved, under authority of section 1814(b) of the Act, on June 13, 1985, Maryland's request for continuation of its experimental reimbursement system. This system was first approved under demonstration authority of section 402 of the 1967 Social Security Act Amendments (as amended by section 222(b) of the 1972 Social Security Act Amendments). This approval provides for continuation of reimbursement to Maryland hospitals under the State's system until such time as 1) a third-party payer is no longer subject to the system and reimburses a hospital on a different basis, or 2) the rate of increase per hospital inpatient admission for the system for the previous 3 years is greater than the national rate of increase in reimbursement for Medicare admissions for the same period.

Massachusetts

The original demonstration period of most Massachusetts hospitals expired on September 30, 1985. These hospitals are now being reimbursed for Medicare inpatient services under the national prospective payment system. The remainder of the hospitals will make the transition to the Medicare PPS effective July 1, 1986. With respect to Medicaid inpatient and outpatient services, Massachusetts has submitted a State plan amendment to HCFA to describe its new payment system for such services. The amendments have not yet been approved by the regional office.

New Jersey

HCFA approved on December 31, 1984, New Jersey's section 1886(c)(5) waiver request for inpatient services. The waiver, which effectively allowed the State to continue its experimental system, was contingent upon New Jersey's acceptance of a number of additional terms and conditions including a rigorous program for the quarterly monitoring and controlling of expenditures under the State system to ensure positively that New Jersey expenditures do not exceed those that would have been made under the Medicare rules.

New York

The original demonstration period for the New York hospitals ended on December 31, 1985. Payments for Medicare inpatient services are currently determined according to the Medicare PPS effective January 1, 1986.

New York has also submitted a State plan amendment to HCFA to set forth its payment methods and standards for Medicaid inpatient services beginning January 1, 1986. The amendment has not yet been approved by the regional office.

Partial-Payer Systems

These alternative State systems for paying hospital care will be the focus of a Report to Congress that is to accompany the 1986 Annual Report on the Impact of PPS. Hence, in this report we do not probe the impact of these systems in great detail. But, here we extend the scope of programs under consideration to other States who have hospital rate regulation systems for some payers, and recognize that Medicare's PPS has established a "partial-payer" regulation of inpatient hospital care revenues in all States.

Besides Maryland, New Jersey, New York, and Massachusetts, some other States that have either recently enacted all-payer regulations, or have had such legislation introduced in their legislatures, have indicated an interest in establishing a DRG-based methodology. For example, two of the most recently enacted State all-payer programs--in Connecticut and West Virginia-- are to be DRG-based. HCFA has not yet received a Section 1886(c) waiver request from either. Also, The Washington State legislature has instructed its State hospital cost commission to design an all-payer rate setting program based on DRGs. Therefore, it is important to examine the feasibility of applying a DRG-based approach such as the Medicare PPS to all payers.

In this chapter we next explore the feasibility of using certain measures of the Medicare PPS--specifically, its prices and its relative weights--as the basis for payment to all payers. The designs of prospective payment systems similar to PPS that have been developed by other payers are then analyzed to examine the extent to which they have incorporated Medicare's policies in such areas as the grouping of hospitals, capital and medical education payments, and treatment of outlier cases.

It should first be noted, however, that the foundation of Medicare PPS is the DRG case classification scheme. This case classification system is not without its critics who argue, among other things, that the DRG approach does not adequately reflect variations in severity of illness within individual DRGs, or that it may not

be appropriate for reflecting resource consumption by certain populations such as children.[1/] While other case classification schemes have been and are being developed, it is beyond the scope of this report to provide a comparative analysis of the strengths and weaknesses of these different methods.[2/] Because DRGs are the basis for PPS and most other per admission reimbursement systems implemented to date, this chapter explores the technical issues associated with their use within an all-payer system. It should be recognized, however, that there may be future improvements to be made in the DRG system or even other classification approaches that may improve per admission payment systems' sensitivity to variations in resource consumption across case groups.

1/See, for example, Susan Horn et al., "Interhospital Differences in Severity of Illness,"New England Journal of Medicine 1985; 313:20-24, and Children's Hospitals Case Mix Classification System Project, Phase 1 Report: Critique of DRGs Across Hospital Settings, National Association of Children's Hospital and Related Institutions, Inc., Alexandria, Virginia, March, 1985.

2/For a discussion of alternative case classification systems, see the 1984 annual supplement of the Health Care Financing Review, HCFA, DHHS, Washington, D.C. A Report to Congress on refining the DRG system for severity of illness, intensity of care and the adequacy of outlier payments is the subject of a separate report mandated by Congress.

A. Appropriateness of Using Medicare Prices and Relative Weights in an All-Payer System

The development of Medicare PPS was a massive undertaking that involved the analysis of substantial amounts of data. To assign a case to a specific DRG, the following patient information is required:

- o admission/discharge date
- o patient age at admission
- o patient sex
- o principal diagnosis
- o other diagnoses
- o operating room procedures
- o other procedures
- o discharge status

This information was obtained from the Medicare Provider Analysis and Review (MEDPAR) file, which contained information on a 20 percent sample of all Medicare hospital claims in 1981.

In addition, to calculate relative weights and, therefore, eventually establish prices, charge data from the Medicare Provider Analysis and Review (MEDPAR) file and cost information from the 1981 Medicare cost reports were also analyzed to develop cost-adjusted charges that were then assigned to specific DRGs. For approximately 109 DRGs that lacked a sufficient number of cases to make statistically significant estimates of relative weights, the MEDPAR data were supplemented with data from

Michigan and Maryland. The recent Medicare recalibration of DRG cost weights was based on all fiscal year 1984 bills contained in the Patient Bill (PATBILL) data base. As a result of using this larger data set, the number of DRGs that had to be supplemented with non-Medicare cases was reduced from 109 to 30.

To establish a DRG-based all-payer system using relative weights that reflect the actual experience of such a broad population would involve considerable analytic effort, assuming the availability of the necessary data. An alternative approach that might be considered by some would be to simply use Medicare's DRG prices or weights as the basis for all payers' payments. However, various analyses have indicated certain problems with these options.

- o Use of Medicare prices would increase payment for non-Medicare patients

On the average, the Medicare population is likely to be older than the general population and therefore be more expensive to care for in the hospital. This observation was confirmed in a study by Suzanne Martin and others that found Medicare patients to have higher costs than other patients on a DRG-specific basis.3/ Thus, the payment of Medicare prices for an all-payer population would likely result in inflated rates paid for the nonelderly population.

3/See Suzanne Martin, A. Frick and M. Schwartz, "An Analysis of Hospital Case Mix, Cost and Payment Differences for Medicare, Medicaid, and Blue Cross Patients Using DRGs," Inquiry (Volume 21, Winter 1984), Blue Cross/Blue Shield Association, Chicago, pp. 369-379.

- Use of Medicare relative weights as the basis for an all-payer system may result in significant distortions of relative payment levels across DRGs.

A more difficult question and perhaps more germane question is whether the Medicare relative weights, rather than the program prices, could be used for establishing all-payer rates. That is, although the absolute Medicare DRG price levels might be too high for application to a general population, might the relationships of prices across DRGs be the same for Medicare and non-Medicare populations? If so, rates for non-Medicare patients could be set by making pro rata adjustments in the Medicare price levels.

This issue was examined by comparing a set of relative weights derived from the New Jersey DRG all-payer system with Medicare's fiscal year 1986 relative weights. The New Jersey system does not have an official set of relative weights. However, it does calculate, for each of its three hospital peer groups, a hospital standard cost for each DRG. This standard cost represents the mean operating cost for all cases in the DRG, treated in hospitals within that peer group.

For the purposes of the analysis, a statewide standardized cost for each DRG was estimated by taking the average cost across all peer groups for each DRG, and weighting each peer group's cost by the proportion of total cases in that DRG that its hospitals treated. A set of New Jersey "relative weights" was then calculated

by dividing each of these DRG standardized costs by the average standardized cost across all DRGs.[4/]

A comparative analysis of these New Jersey weights with the fiscal year 1986 Medicare weights reveals several interesting findings. First, Medicare/New Jersey-blended DRG specific payment rates were calculated by multiplying the New Jersey statewide average costs by the Medicare relative weights. By applying these payment rates to all New Jersey hospital discharges in 1982, it was found that use of these rates would have yielded aggregate payment amounts roughly equal to those resulting from the use of synthetic New Jersey weights. Thus, at first blush, there is some indication that the Medicare weights, used in conjunction with a statewide--rather than a Medicare--average cost, might be appropriate for establishing all payer rates.

However, closer examination of the relative weights reveals certain weaknesses. At the DRG level, substantial differences exist between the two relative weights. For 167 of the DRGs, the Medicare weights differ from the New Jersey weights by more than plus or minus 20 percent. These DRGs in which substantial variation exists between the New Jersey and Medicare weights accounted for nearly one-third of all admissions in New Jersey during 1982.

[4/]Medicare's PPS used hospital-weighted national average standardized operating costs as the basis (i.e., 1.0000) for the cost-weights per DRG.

These differences exist even at the major diagnostic category (MDC) level. Based upon the New Jersey distribution of cases across DRGs in 1982, total payments were calculated for each MDC using both the New Jersey and Medicare weights. Table 2 compares for each MDC the payments based on the Medicare weights to those using the New Jersey weights. In 10 of the MDCs, payments based on the Medicare weights would have been higher, by 40 percent or more in two MDCs.

This analysis of New Jersey data indicates that the Medicare relative weights may not accurately reflect the relative costs across DRGs for one State's entire population. This occurs mainly because the Medicare relative weights have a national basis, rather than a single State basis, and reflect a patient population that is aged or disabled, rather than a general population. As noted in the June 10, 1985, Federal Register proposing recalibrated Medicare DRG cost weights, "State Medicaid agencies and other payers of health care services that may be interested in using a Hospital Prospective Payment System should recognize that DRG classifications and weights developed from Medicare discharges may not be appropriate for use in the payment of non-Medicare cases.... Other payors interested in using the DRG classification system may wish to develop DRG groupings and weights. . . .using data more appropriate to their respective beneficiary populations." This caveat is especially focused on DRGs with low Medicare case volumes.

Table II-2
COMPARISON OF PAYMENT LEVELS BASED UPON
NEW JERSEY AND MEDICARE RELATIVES, BY MDC

MDC	Percent by Which Payment Levels Based Upon New Jersey Relative Weights are Greater or Less than Levels using Medicare Weights
1	+5%
2	+9%
3	-4%
4	-2%
5	+19%
6	+3%
7	0%
8	+12%
9	+1%
10	+9%
11	-1%
12	+15%
13	-4%
14	+23%
15	+12%
16	-4%
17	-12%
18	-30%
19	0%
20	-16%
21	-30%
22	-40%
23	-49%

While differences in policies of these two programs (e.g., the costs included in calculation of weights) may account for some of the variation, the major reasons for the differences in weights across DRGs and MDCs is likely due to the differences in the characteristics of the two populations.

Use of the Medicare weights to establish prices in an all-payer system similar to New Jersey's could be expected to result in prices that are substantially higher than average cost for some admissions, lower than average cost for others. To the extent that individual hospital's admissions differ from statewide norms, certain facilities would likely experience substantial windfalls, while others might suffer serious financial problems.5/

B. **Availability of Data**

Assuming States may not wish to use Medicare-specific prices or weights for their all-payer systems, the issue becomes whether adequate data capacity exists for them to develop their own weights and prices. The patient information needed to assign cases to individual DRGs is reported on the UB-82, a hospital billing form that all hospitals are now required to use for Medicare cases.

5/These caveats aside, it should be noted that several State Medicaid agencies, faced with data limitations, opted to use the Medicare relative weights as the basis for their DRG systems, at least until they can establish their own weights. As will be described later, however, one of these programs attempts to mitigate cross-hospital distributional problems by establishing hospital-specific prices based on each facility's historical costs.

In addition, this form contains case-specific charge information that might possibly be used for calculating relative weights. The original Medicare weights were developed from 1981 charge information that was adjusted on the basis of Medicare hospital costs reports for the same year. Analyses conducted by HCFA and the Prospective Payment Assessment Commission (ProPAC) indicate, however, that, at least for Medicare, unadjusted charge data will yield essentially the same weights as cost-adjusted data. If further analysis indicates that this holds true for establishing a single set of DRG rates for all payers, the charge information on the UB-82 or similar forms may provide important information needed to establish relative weights. Baseline cost information may still need to be collected to establish initial price levels, particularly if certain costs--such as capital or direct medical education--are to be carved out of the DRG standardized base cost and handled separately.

Use of the UB-82 by hospitals is fairly widespread. Hospitals must use this form for all Medicare admissions and will be required to do the same for Medicaid admissions beginning in October 1986. At least a dozen States have mandated that hospitals also use the UB-82 for other payers' patients. The use of this form by other payers in States that have not included a specific reference to this form in their insurance regulations also appears to be relatively high.

In addition, States are moving to establish data commissions with the responsibility to collect, analyze and disseminate information on health care utilization and costs. Major supporters of the establishment of such commissions in a number of States have been business communities hoping to be able to use the information assembled by these commissions in efforts to reduce their own health

care costs. Table 3 lists those States that have authorized health data commissions or established administrative units with similar responsibilities, and the dates they were established. Although, at this time, none of these commissions collects all the data necessary to develop DRG rates, they do represent the administrative capacity within various States to carry out this task.

In the preceding discussion of the development of an all-payer data base, reference has been made to the State as the level at which rates are established. While certainly the option exists for mandating an all-payer system that establishes regional or even national rates, the State has been identified as the administration unit for such a system for the following reasons:

- State Government historically has had responsibility for regulation of insurance and administers all existing all-payer systems;
- A substantial number of States are developing the capability to conduct the analyses necessary to establish DRG-based rates for all payers;
- Substantial variation in hospital price levels exists across both regions and States. Establishment of all-payer systems at the State level would allow the design of systems that eventually could be brought together at the regional or national levels, while minimizing any major short-term destructive disruptions of local markets.

This last point concerning sensitivity to different conditions across States is highlighted in the following section that describes the DRG-based prospective payment systems designed by individual payers and States.

Table II-3
States With Health Care Cost Data Commissions/Agencies

State	Year Established
Arizona	1971
California	1973
Colorado	1985
Connecticut*	1984
Florida	1979
Illinois	1984
Iowa	1983
Maine	1976
Maryland*	1977
Massachusetts*	1978
New Hampshire	1985
New Jersey*	1978
New York*	1979
North Carolina	1985
Oregon	1985
Rhode Island	1971
Texas	1985
Washington	1976
West Virginia*	1983
Wyoming	1985

*Was, is or would be part of all-payer State rate setting process

C. Policy Issues Associated with the Design of a DRG-Based Prospective Payment System

Medicare PPS is the most widely known DRG-based prospective payment system. However, a number of other payers have implemented or are developing their own DRG reimbursement systems. The policies incorporated in these other programs often differ from Medicare's PPS in a number of important areas, such as the development or use of relative weights, treatment of capital or medical education costs, and outlier identification and payment. In this section, the programs of these other payers are described to highlight the range of design options available when structuring a DRG-based all-payer prospective payment system.

The DRG-based systems established by public payers, such as State Medicaid programs, and by certain Blue Cross (BC) plans around the country, exhibit substantial variation in their design. The policies of these programs in the following areas are described and contrasted with Medicare PPS policies:

- o budgetary objectives;
- o rate development methodology;
- o hospital peer groupings;
- o exclusion of certain facilities;
- o special treatment of certain costs;
- o outlier identification and payment;
- o transfer cases; and
- o rate adjustment.

In addition, the preliminary design decisions of three States--Connecticut, Washington, and West Virginia--that are exploring or pursuing the development of DRG-based all-payer systems also are described.

1. Public Payer DRG Systems

a. State Medicaid Program.

As mentioned earlier, since the early 1980's there has been a major move in State Medicaid programs away from retrospective, cost-based hospital reimbursement policies toward prospective payment systems. This shift was facilitated by 1981 statutory changes in Federal Medicaid requirements that provided greater latitude in the design of the Medicaid hospital reimbursement policies.

Medicare's development of its DRG-based reimbursement system offered an attractive model to State Medicaid programs. Between July 1983 and January 1985, five States--Michigan, Ohio, Pennsylvania, Utah, and Washington--established DRG systems. Two additional States--Minnesota and Oregon--planned to implement DRG systems, while several other States--Colorado, Indiana, Montana, South Dakota, and Tennessee--are either designing DRG systems or considering their adoption. Thus, what is described hereafter is representative of apparent State intentions as of Fall 1985, rather than the outcomes of those States' Medicaid payment policy revisions.

The major design features of the seven Medicaid DRG programs expected to be operational by end of 1985 are described below. Table 4 summarizes many of these key areas and compares them to Medicare's PPS. In reviewing these

comparisons, it should be kept in mind that State systems are continually under review and are subject to amendment.

i. Budgetary Objectives

Each of the seven States designed its program with specific budgetary objectives in mind. As did Medicare, three of the seven States (Pennsylvania, Oregon, and Michigan) designed their systems to keep first year hospital expenditures at the levels where they would have been, under their previous systems, whereas four States (Minnesota, Ohio, Utah, and Washington) sought to reduce their annual growth in hospital expenditures: Minnesota and Washington sought to limit growth to 5 percent, Ohio to 7.5 percent, while Utah also reduced projected expenditure levels.

ii. Payment Methodology

As expected, all of the seven Medicaid systems established a fixed price per admission based on the characteristics of the case and, in most cases, the characteristics of the hospital. All but one of these programs use the same 468 DRG classifications as Medicare for establishing rates. Minnesota is using an alternative system developed by collapsing the 468 DRGs classifications into 37 broader diagnostic categories.

Relative weights are used in all of these States' Medicaid systems. Four of the States (Michigan, Minnesota, Ohio, and Pennsylvania) developed their own State-specific Medicaid weights based upon historical cost data. The other three

States (Utah, Washington, and Oregon) opted to use Medicare's weights. These latter States did not develop State-specific weights because of resource or data constraints. Washington has attempted to offset the distribution problems associated with using these weights by establishing hospital-specific rates based upon individual facilities' historical costs. Several States that established their own relative weights provide for phasing-in periods similar to Medicare's. In Pennsylvania, for the first year of the program, hospital payments were designed to be a 25/75 percent blend between peer group DRG and hospital-specific rates, respectively. For the second year, the blend will be 50/50, and the third year rates will be based entirely on peer group. In Michigan, beginning October 1, 1985, a blended price is used based on two-thirds hospital-specific and one-third standardized statewide price per case. Effective October 1, 1986, the ratio will be one-third hospital-specific and two-thirds standardized. As of September 1, 1987, the price per case will be based entirely on the State price.

iii. Peer Groupings

Under Medicare's PPS, payment amounts are established separate for urban hospitals and rural hospitals and adjusted by an area wage index. Payments are adjusted for teaching hospitals. Regional differences also are considered during the program's transition period.

State Medicaid DRG programs display a wide degree of variation in their peer grouping approaches. In addition to Utah and Washington, Michigan and Minnesota also establish hospital-specific prices, although they may eventually establish broader groupings. Pennsylvania employs a peer grouping methodology which divides nonchildren's hospitals into seven groups. Thirteen measures of four broad categories were examined: teaching status, Medicaid volume, environmental

Table II-4 State Medicaid DRG Reimbursement Systems

State Implementation Date	Relative Weights	Price Differential/ Peer Groupings	Excluded Facilities/Units	LOS Outlier Identification / LOS Outlier Payment	Cost Outlier Identification / Cost Outlier Payment	Cost Given Special Treatment
Medicare 10-1-83	Developed from 20% sample of 1981 claims data (MEDPAR) and 1981 cost reports*	During transition, 20 groups, 9 census regions and national, each with urban/rural split. Ultimately only national rates	Children's Hospitals; Rehab Hospitals and Units; Psych, Alcohol/ Drug Hospitals/Units; Long Term Care Hospitals	1.94 S.D. or 22 days (pending FY86 revision) 60% of Per Diem	2.0 times DRG rate or $13,000 (pending FY86 revision) 60% of dif. between adj. costs and threshold	Capital Direct Medical Education Bad Debt
Michigan 2-1-85	Developed state-specific Medicaid weights	Hospital-specific rates	Distinct Part Psych Units; Out of State Hospitals; HMO's Freestanding Psych and Rehab Hospitals; Long-Term Care Hospitals State-Owned Psych Hospitals	3 S.D.'s, Burns, and neonatal are 2 S.D.'s 60% of Per Diem	No Policy For Cost Outliers	Capital Medical Education Indigent Care
Minnesota* Schedule for 8-1-85	Developed state-specific weights for 37 broad diagnostic categories	Hospital-specific rates (May group later)	Proposing no exclusions of any type	2 S.D.'s 60% Per Diem	Burns 3 S.D.'s: 60% of Cost Neo-natal 1 S.D.: 80 % of Cost	Capital Indigent Care Malpractice Ins.
Ohio 10-1-84	Develop state-specific Medicaid weights (Append small cells with PA and Medicare data)	14 Peer Groups (Scheduled to change as of 7-1-85)	HMO's; Freestanding Psych and Rehab Hospitals; Long-Term Care Hospitals	2 S.D.'s non-neonatal: 60% of Per Diem 1 S.D. neonatal: 80% of Per Diem	2 S.D.'s non-neonatal: 60% of Adj. Cost 1 S.D. neonatal: 80% of Per Diem	Capital Medical Education
Oregon* Schedule for 10-1-85	Used Medicare relative weights	One statewide peer group	Children's Hospitals; Distinct Part Psych and Rehab Units; HMO's; Freestanding Psych and Rehab Hospitals; Long-Term Care Hospitals	No policy for LOS Outliers	Cost Outlier Policy Under Development	Capital Medical Education Indigent Care

*System has not yet received Federal approval.

Table II-4 State Medicaid DRG Reimbursement Systems
Continued

State Implementation Date	Relative Weights	Price Differential/ Peer Groupings	Excluded Facilities/Units	LOS Outlier Identification LOS Outlier Payment	Cost Outlier Identification Cost Outlier Payment	Cost Given Special Treatment
Pennsylvania 7-1-84	Developed state specific Medicaid weights	Seven	Distinct Part Psych-Units; HMO's; Freestanding Psych and Rehab Hospitals; Long-Term Care Hospitals Distinct Part DRUG/ALC Detox & Rehab Units	> 1.94 S.D. or 20 days 60% of Per Diem	Burns and Neo-natal Only (Medicare Criteria) 100% of Cost that Exceeds 150% of DRG Amount	Capital Medical Education Indigent Care
Utah 7-1-83	Used Medicare relative weights	One statewide peer group	Children's Hospitals; HMO's; Freestanding Psych and Rehab Hospitals; Long-Term Care Hospitals; Utah State Hospitals	> 1.94 S.D. or 20 days Minimum of 60% of Per Diem	No policy for cost outliers	Capital Medical Education
Washington 1-1-85	Used Medicare relative weights	Hospital-specific rates	Children's Hospitals; Distinct Part Psych and Rehab Units; HMO's; Freestanding Psych and Rehab Hospitals; Long-Term Care Hospitals	No policy for LOS Outliers	> $12,000 or 1.5 times DRG rate 80% of Cost	Capital Medical Education

factors, such as average personal income in a hospital's geographic area and indigent populations; and costs. Each children's hospital is considered its own peer group.

Ohio arranged its peer groups according to the Medicare wage index--based on the assumption that the wage index was the best substitute measure of the cost of doing business. Two States that use Medicare weights--Utah and Oregon--establish only one statewide rate for each DRG.

iv. Inclusion/Exclusion of Certain Facilities/Units

One underlying assumption of any DRG methodology is that the capability exists to group patients with relatively similar medical needs and resource consumption patterns. There are, however, differences in the treatment modes and resource requirements in particular types of hospital facilities. Because of this, the Medicare DRG system has not yet been applied to the following types of facilities or units within hospitals:

- o Children's hospitals
- o Freestanding psychiatric and rehabilitation hospitals
- o Distinct-part psychiatric units
- o Distinct-part rehabilitation units
- o Long-term hospitals
- o Alcohol and drug detoxification units and hospitals.

For freestanding psychiatric and rehabilitation hospitals, six of the seven Medicaid DRG States follow the Medicare lead and exclude such facilities from

:heir DRG systems. In addition, Minnesota, Ohio, and Utah are the only other States which include distinct part psychiatric units, although under the Ohio system, unit-specific special weights are established. Ohio also covers distinct part rehabilitation units, but only through a DRG-by-DRG appeal process whereby a hospital must show that its mean cost and mean length of stay (LOS) are above the State's basic adjusted level in order to receive extra payment for these cases.

Four States (Ohio, Pennsylvania, Minnesota, and Michigan) have included children's hospitals within their DRG programs, although they consider each children's hospital its own peer group and, therefore, establish hospital-specific DRG payment rates for these facilities. In contrast, Utah, Washington, and Oregon exclude children's hospitals from their DRG systems. All Medicaid DRG States exclude both extended-stay facilities and HMOs from their DRG reimbursement plans.

v. Special Treatment of Certain Costs

Capital Costs. For hospital accounting years prior to October 1986,[6] capital costs are treated as pass-throughs under Medicare's PPS. Three of the seven Medicaid DRG programs—Minnesota, Utah, and Michigan—also treat all capital expenses as a pass-though cost. Ohio has established an add-on factor to its DRG prices whereby payment is tied to the ratio of capital costs to operating costs. For example, if a hospital's capital costs are 7 percent of operating costs, this hospital would have 7 percent added on to its DRG rates. Washington is the

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[6] Regulations were proposed June 3, 1986 that would pay capital costs on a prospective basis beginning October 1, 1986.

only State which currently includes all capital (and indirect medical education) costs in its DRG rates. In Pennsylvania, only capital costs for major movable equipment are paid as part of the DRG rate; other capital costs are passed through.

Medical Education Cost. As in Medicare, all State Medicaid DRG systems treat direct medical education costs—such as residents' salaries, teaching salaries, and others—as a pass-though which is reimbursed on a reasonable cost-related basis. In addition, Pennsylvania establishes separate peer groups for major teaching facilities in its system and incorporates annual teaching cost payment limits indexed to a measure of wage inflation. This results in an annual cap on the payment to Pennsylvania teaching hospitals.

Both Ohio and Michigan adjust for indirect medical education costs as does Medicare, and reimbursement for these costs is made separately from the DRG payment. Both States follow the basic Medicare methodology and determine the adjustment by the ratio of interns and residents to the number of beds in the hospital. This adjustor is then used to compute a percentage add-on to the DRG rates for teaching hospitals.

Indigent Care Three of the seven Medicaid DRG States (Minnesota, Pennsylvania, and Michigan) include an adjustment for low income or indigent patients. Minnesota would increase the adjusted base-year cost per admission for hospitals in which Medicaid or general assistance patients constitute more than 15 percent of total admissions.

As mentioned earlier, Pennsylvania incorporates an indigent care factor in its peer grouping formula. Michigan set aside $20 million for 1985, which is to be redistributed according to each hospital's specific percentage of indigent volume

and is based on the ratio of Medicaid, crippled children, resident county hospitalization, and bad debt charges to total inpatient charges. This adjustor was fixed so as to spend exactly $20 million.

vi. Outlier Identification and Payment

LOS Outliers. As in Medicare, outlier cases are given special consideration in Medicaid-DRG States. These outliers—cases which are unusually expensive to treat—are defined by Medicare using both high LOS and high cost criteria. The FY 1985 Medicare criterion for LOS outliers was 22 days or 1.94 standard deviations above the DRG-specific geometric mean length of stay. Proposed regulations for fiscal year 1986 lower the day threshold point to 17 days. Following a series of emergency legislative extensions, the new thresholds went into use May 1, 1986. Payment for these LOS outliers is made at 60 percent of the per diem for days above the threshold. Under Medicare, total outlier payments are to be 5 percent of total annual expenditures.

With the exception of Washington and Oregon, all States recognize LOS outliers—and use similar identification and payment methodology to Medicare's—although some variation exists in the determination of threshold points. Pennsylvania and Utah use Medicare's current criteria to identify LOS outliers. Ohio sets its LOS outlier threshold point at 2.0 standard deviations above the geometric mean LOS, except for neonatal cases (DRGs 385-390), which are set at 1 standard deviation above the mean. Payment for non-neonatal outliers is set at 60 percent of the per diem, while neonatal outliers are reimbursed at 80 percent of the per diem. Michigan treats both neonatal and burn cases differently from its customary LOS outliers. With the exception of these two categories of cases, the

LOS outlier threshold is 3 standard deviations above the mean. For neonatal and for burn cases the cutoff point is set at 2 standard deviations. Payment for outlier days in all cases is set at 60 percent of the per diem.

Cost outliers For fiscal year 1985, Medicare set its high cost outlier threshold at the greater of costs which are twice the Federal rate for the DRG or $13,000. Changes for fiscal year 1986, and effected May 1, 1986, raised this to $13,500. Payment for such cost outliers is made at 60 percent of the difference between the hospital's base rate (adjusted for wage rates and indirect teaching) and the cost threshold.

Medicaid-DRG States again display diverse identification and payment methodologies for cost outliers. Neither Utah nor Michigan recognizes cost outliers.

Washington determines its high cost threshold point in a similar manner to Medicare, but uses the greater of 1.5 times the Federal DRG or $12,000 as its outlier determination criteria. However, unlike Medicare and most other Medicaid DRG States—which pay at 60 percent of the cost above the outlier threshold—Washington pays 80 percent of costs which exceed the threshold point so would Minnesota. In Pennsylvania, only neonatal and burn cases are eligible for cost outlier payments, with payment for these cases set at 100 percent of costs above its threshold level, which is set equal to 150 percent of the DRG amount. Ohio identifies its cost outliers in a manner similar to that used for its LOS outliers. For all DRGs except neonatal cases (DRGs 385-390), the threshold point is 2 standard deviations above the statewide mean DRG-specific cost. For other cases, the threshold is 1 standard deviation above the statewide mean cost. Payment for

neonatal cases is 80 percent of the cost above the threshold point, while payment for all other DRGs is set at 60 percent of the wage and teaching adjusted costs. Oregon has not yet determined what its outlier policies will be. In most States, when a case qualifies as both a cost and LOS outlier, only the LOS payment policies are applied.

vii. Transfers

Transfer cases are those cases admitted at one hospital and then discharged to another hospital while remaining within the same DRG classification.

All of the Medicaid-DRG States—as is true for Medicare—pay the transferring hospital on a per diem basis, not to exceed the DRG rate. Although Medicare will pay the receiving hospital the full DRG rate, there is some variation among the Medicaid DRG States in this regard. States which follow the Medicare lead and pay the full DRG rate to the receiving hospital include Pennsylvania, Washington, and Michigan. Oregon also will pay the full DRG rate, but only if the patient's LOS is less than 18 days; otherwise, it will pay a per diem rate. Minnesota and Ohio pay the receiving hospital a per diem rate. Utah pays the receiving hospital a minimum of 60 percent of billed charges. If the DRG rate is higher than this 60 percent figure, the full DRG rate will be paid.

viii. Recalibration of Weights and Updating of Payment Amounts

A number of Medicaid DRG States have yet to determine how their DRG rates will be adjusted in future periods. Other States have established plans in this

area. Michigan for example, will update for inflation by indexing its rates to a Michigan hospital market basket and HCFA price proxies and will recalibrate its relative weights at least triennially. Pennsylvania plans to both update for inflation and recalibrate its weights using more recent data for all peer groups on an annual basis. If a hospital experiences cost increases below the general inflation rate, the average of these two rates of increase is used to determine the allowable increase in the peer group rates. However, if a hospital's growth rate is more than the inflation rate, the inflation rate is used in the peer group rate increase equation.

Ohio currently has no policy to recalibrate relative weights, but will adjust its prices for inflation sometime in 1986. The procedure is such that if the difference between the reported costs for the base year trended forward—using an Ohio hospital market basket factor—and the most recent cost information is greater than 10 percent, then Ohio will rebase its prices using the more recent data. No specific formula for what exact form the rebasing will take has yet been established.

ix. The Impact of Medicaid DRG Systems

Sufficient data are not yet available to fully assess the impact of these State Medicaid DRG systems. Information from at least one State, however, provides some interesting evidence of possible system effects. When it recalculated its rates at the end of its first year using DRGs, the State of Pennsylvania found that overall it was able to reduce its rates by about 4 percent.

b. Other Public Programs

Several other public programs have made use of DRG-based reimbursement systems. The Defense Department's Civilian Health and Medical Program of the Uniformed Services (CHAMPUS)—a program that finances health care for the dependents of military personnel—established a demonstration program in September 1984. This demonstration was an aspect of a mandate in Section 634 of P.L. 98-525, the Department of Defense Authorizations Act, 1985 for a study of the use by CHAMPUS of the Medicare PPS. Under this demonstration, CHAMPUS switched from paying hospitals in South Carolina billed charges to paying them on a DRG-basis. The rates paid by CHAMPUS were set equal to the Medicare rates paid hospitals.

A comparison of the DRG rates actually paid with the associated billed charges (the previous basis for payment) for the first 6 months of the demonstration indicated substantial differences in payment levels for certain cases. For 47 DRG classifications, which accounted for about one-quarter of total DRG base payments made during this period, the DRG base amount exceeded average billed charges by more than 25 percent. For 85 DRGs, which represented about one-third of total DRG base payments, the average DRG base amount was at least 25 percent below the average billed charges. This last comparison overstates the savings from DRGs in that the DRG base amounts do not include capital and medical education add-ons, the costs of which are incorporated with billed charges. This demonstration was discontinued in September 1985. However, it provided useful experience that will be taken into account in implementing Section 9122 of PL 99-272, the Consolidated Omnibus Budget Reconciliation Act of 1985, which

requires hospitals that participate in Medicare to also participate in the CHAMPUS and CHAMP-VA programs.

Another Federal agency, the Veterans Administration, has begun using DRG as part of its facility planning and budgeting efforts.

Finally, the Washington State legislature has mandated the development of a DRG-based hospital reimbursement system for the State's workmen's compensation program.

2. Private Payer DRG Systems

Among the private payers, to date only a small number of BC plans have followed Medicare's lead and designed their own DRG-based reimbursement systems. In general, BC plans appear to have been better able to establish these systems than other private payers, such as commercial insurers, because of their relatively larger market shares.

Ten BC programs have established, or are shortly expected to implement, DRG-based reimbursement systems. These programs vary in scope, falling into the following three broad categories:

o Program Wide, in which a majority--if not all--BC member hospitals participate. Individual BC programs that fall within this category include:

(1) Kansas, which operates only a DRG-based reimbursement plan and has all general hospitals in the State under such a contact.

(2) Missouri (East Region), which is negotiating with the State hospital association and hopes to include all 58 hospitals in its jurisdiction under its system.

(3) Oklahoma, where, like Kansas, contracting with BC for general hospitals involves the agreement to accept BC's DRG rates.

(4) Arizona, which has contracting provisions similar to Oklahoma and Kansas. Unlike Kansas, however, Arizona BC estimates the percentage of total hospitals in the State under contract at between 80 and 90 percent.

o Pilot Programs, in which one or a few hospitals are under DRG contracts. These demonstrations are attempts to determine if expansion is desired. BC programs in this category include:

(1) Mississippi, which has contracted with a single, 400+ bed urban hospital.

(2) Pennsylvania (Northeast Sector), which has a contract with a single 300+ bed urban hospital in Wilkes-Barre.

(3) Nebraska, which offered its program to only 19 of the State's 105 hospitals. Contracts have been signed with 16 of these hospitals.

(4) Oregon, which has one Portland 300+ bed hospital in its plan.

o PPOs, in which BC contracts with specific hospitals as primary sources of subscriber medical treatment in return for reduced charges paid on a DRG-basis. BC programs in this category include:

(1) Florida, which as of January 1, 1986 has contracted with 54 of the State's 214 acute-care hospitals and would like to include an additional hospital during 1986.

(2) Michigan, which has contracted with 104 acute care general hospitals, representing roughly 67 percent of member hospitals in the State.

The major features of these BC DRG systems are described below. They are also summarized in Tables 5 and 6.

1. Rate Setting Methodology and Payment Scheme

Unlike Medicare and Medicaid, relative weights are not used in any of the BC program wide plans. They are, however, used in one of the pilot programs (Pennsylvania) and one of the PPO plans (Florida). Both of these last two programs used the Medicare weights. In the case of Pennsylvania, BC officials indicated that this was primarily due to the fact that the weights were already established and, therefore, easy to adopt. Florida BC had insufficient historical client data necessary to determine DRG-specific information and, therefore, saw the Medicare weights as the principle option for devising its DRG rates.

The remainder of the BC plans set their DRG rates by first gathering client data from hospital records for some base period (1982, 1983, or 1984-- depending on the proposed system's implementation date), and then grouping each case into

the appropriate DRG. Data sources ranged from an individual hospital's claims data—in the case of the single hospital pilot programs—to statewide hospital abstract data. Charge rather than cost data were used in all but one program (Michigan).

Various statistical measures relating to billed hospital charges (or costs, in Michigan's system) for the data-base year were used by the different programs to establish base year rates. With the exception of the Florida PPO and the Pennsylvania pilot project, none of the other plans went through the process of developing relative weights per se as the basis for their DRG prices. Instead, they used other measures to arrive at their base year prices. The measure most frequently used was the average charge per DRG. Two States used somewhat different approaches; Kansas BC used the 75th percentile of 1982 charges (the charge per DRG which would have paid 75 percent of the cases in full), whereas Oklahoma used a combination of the average charge per DRG and the 50th and 60th percentile of 1983 charges. These base year rates were then trended forward to the program implementation date to account for inflation, completing the process of setting DRG rates.

The only exception to this was BC of Arizona, which set its rates at the average charge per DRG using 1982 data, but did not trend these charges forward to its November 1, 1983, implementation date. No specific justification was given, although perhaps Arizona BC officials assumed that 1982 charges were high enough so as not to warrant an adjustment for inflation. The fact that Arizona BC was able to lower its DRG rates as part of its April 1985 annual rate adjustment by an average of 5 to 7 percent may lend credibility to such an assumption.

Kansas is the only State in which DRG rates are not set at a fixed amount. Under the Kansas plan, a maximum allowable payment (MAP) is established for each DRG. Charges up to the maximum are paid. Kansas BC also provides an annual year-end incentive reimbursement provision in their plan. For each hospital, cases are separated according to whether billed charges were above or below the MAP. For each of these sets of cases, the differences between the hospital's charges are then summed. The hospital is then reimbursed an incentive equal to the lesser of 50 percent of the sum of differences below the MAP or 100 percent of the sum for differences above the MAP. This provision is primarily aimed at bringing down payment to hospitals with historically high charges, while providing low charge facilities with some cushion against their financial liability for occasional cases in which charges exceeded the MAP.

ii. Peer Groupings

Substantial variation exists in the way each BC plan establishes hospital peer groups within its DRG system. The two most common criteria used are bed size and geographic location. These categories often effectively result in an urban/rural division since those hospitals with the most beds are typically in large urban areas, whereas those hospitals with the fewest beds are generally in rural areas. Both the Kansas and Oklahoma plans follow this pattern. Florida BC did not establish formal peer groups but instead arbitrarily grouped its PPO hospitals based on the 12 counties in which the PPO hospitals are located. Michigan does not have formally recognized peer groupings, but instead uses both teaching and capital adjustment factors to modify its base DRG prices. Because all the other State BC plans set their DRG rates roughly equal to average trended charges, which would already have incorporated capital and teaching costs, no additional adjustments for

Table II-5 Program Wide Blue Cross/Blue Shield DRG Reimbursement

State Implementation Date	% of Hospitals Under BC/BS Contract / % of Contracting Hospitals Under DRG System / % of Subscriber Marketshare	DRG Rate Setting and Payment Methodology / Relative Weights Used	Peer Groupings	Outlier Identification / Outlier Payment	Payment to Transferring Hospital / Payment to Receiving Hospital	Basis for Annual Rate Adjustments
Kansas	100%	Maximum payment set at 75th percentile of trended 1982 charges with partial year-end adjustment	Six Based on Bed size and geographic location	Mean LOS + 1½ standard deviations	Charges up to MAP	CPI Inflation and Peer Group Charge Trends
1-1-84	100%	None		High LOS: Charges up to MAP plus per diem. Low LOS: Charges up to MAP	Charges up to MAP	
	37%					
Missouri (East Region)	100%	Fixed rate per DRG set at mean trended 1983 charges	Six: - Four Urban - Two Rural	90th Percentile of LOS plus three days (high Threshold Only)	Charges up to DRG rate	Yet to be Determined
	N.A.	None		Per Diem	DRG Rate	
Yet to be determined	18-20%					
Oklahoma	97%	Fixed Rate 50th, 60th Percentile and Mean Trended 1983 charges	Four Based on Bed Size	High LOS: Per Diem / High Cost: DRG rate plus 90% of charges above DRG rate times 2.75	Lesser of charges or DRG rate	Rebasing of DRG rates
1-1-84	100%	None			Lesser of charges or DRG rate	
	15%					
Arizona	80-90%	First year Fixed Rate Set at Mean Untrended 1982 charges Per DRG	Twelve: -State/specialty -County -Mining company -Psychiatric 8 Others	Outliers Not Recognized	DRG percentage based on proportion of total LOS	Comparison of Hospital-specific Charge Patterns to Peer Group Mean Charge Per DRG
11-1-83	100%	None			DRG percentage based on proportion of total LOS	
	N.A.					

Table II-6 PRO/Pilot Blue Cross/Blue Shield DRG Reimbursement Systems

State Effective Date	Number of Hospitals Participating	DRG Rate Setting and Payment Methodology Relative Weights Used	Peer Groupings	Outlier Identification Outlier Payment	Payment to Transferring Hospital Payment to Receiving Hospital	Basis for Rate Adjustments
Michigan (PPO) 4-1-85	104	Trended statewide mean cost per DRG from 1981 to 1985, adjusting for hospital-specific capital and medical education None	None	(N.A.) (N.A.)	Per Diem Full DRG rate	Standard Economic Indicator (e.g. Medical Care Component of CPIU)
Florida 11-1-84	54	Mean 1983 trended charge/hospital, adjusted via Medicare Case Mix Index Medicare	Twelve (counties)	95th Percentile of Length-of-Stay	Transfers Not Recognized	In line with general inflation rate
Nebraska (Pilot) 4-1-84	16	Mean 1983 trended charge/DRG, adjusted to correspond to rates in KS., OK. NJ. None	Four	Costs above 2.25 times DRG rate Charges	Per Diem Per Diem	Yet to Be Determined
Mississippi (Pilot) 6-1-85	1	Mean 1983 trended charge/DRG	----------	Low LOS; adopted threshold set in Kansas system Per Diem	No Policy Established	Yet to Be Determined
Pennsylvania (Northeast Sector) (Pilot) 1-1-85	1	Mean 1983 trended charges Payment limited to 98% of charges Medicare	----------	Outliers Not Recognized	No Policy Established	At or Below General inflation Rate

these costs are made other than the peer group decision. Aside from the teaching and capital adjustment, base DRG prices under the Michigan plan are identical for all hospitals participating in the PPO.

Arizona's method of peer grouping is perhaps the most complex of all the State BC plans. Arizona uses 12 peer groups: four arbitrary groups based solely on the type of hospital--State and specialty hospitals (including children's and alcohol-rehabilitation hospitals); county; mining company-owned; and psychiatric hospitals--and eight groups resulting from a 15 variable cluster analysis in which each variable was assigned a specific weight. This particular grouping scheme is worth noting because Arizona is the only State plan which includes freestanding psychiatric hospitals and children's hospitals in its DRG reimbursement system.

iii. Other Exclusions/Inclusions

All BC plans, except Arizona's, exclude from their DRG reimbursement system children's hospitals, freestanding psychiatric hospitals, and substance abuse treatment units. Kansas and Michigan do, however, include substance abuse detoxification services within hospitals. Michigan also includes adult psychiatric services within its PPO hospitals, although child and adolescent psychiatric services are not covered.

Although each of these BC plans uses the list of 468 DRGs developed at Yale and implemented by Medicare, Mississippi was the one State for which there was no experience for a substantial number of DRGs--in its case between 80 and 100--and these were excluded from the plan and are reimbursed based on billed charges. Florida BC is the only nonpilot plan which excludes transfers from its DRG reimbursement methodology.

iv. Outlier Identification/Payment

As in the Medicare PPS and in Medicaid-DRG States, special reimbursement provisions are in effect for outliers under all BC plans except those in Arizona and Pennsylvania. There is a much wider range of outlier identification criteria used than in Medicare and in Medicaid-DRG States, ranging from only low LOS outliers (Mississippi) to a combination of both LOS and cost (Oklahoma). The States recognizing LOS outliers reimburse outlier days on a per diem basis. For the two plans (Oklahoma and Nebraska) which use high cost as the determinant, the DRG rate is multiplied by some factor to determine the outlier threshold point. Charges above this threshold point will then be paid to the hospitals in addition to the usual DRG rate. However, no charges between the DRG rate and the threshold point will be reimbursed. Nebraska BC uses 2.25 as its multiplier and reimburses 100 percent of charges above the cost threshold, whereas Oklahoma uses a 2.75 factor and reimburses 90 percent of charges above the cost threshold.

v. Transfers

The BC plans vary in the way they treat transfer cases. Perhaps the most basic scheme is used by Arizona BC in which each hospital receives the appropriate proportion of the DRG rate based solely on its share of the total number of days a patient spends in both hospitals. If 25 percent of the total length of stay is in Hospital A and 75 percent is in Hospital B, Hospital A receives 25 percent of the DRG rate and Hospital B the remaining 75 percent. Since there are no outliers in the Arizona plan, this formula applies regardless of how long the total LOS is. A number of other plans pay the transferring hospital charges up to the fixed DRG amount while paying the full DRG amount to the receiving hospital. Oklahoma simply pays the lesser of charges or the DRG rate to all hospitals involved. Other

State plans, such as those in Michigan and Nebraska, employ a per diem payment methodology for their transfer cases.

It is interesting to note that the pilot programs which have contracted with only one hospital have no special provision should a patient be transferred to, or from, the pilot hospital.

vi. Rate Adjustment Methodology

All BC plans expect to adjust their DRG rates annually. A number of plans, for example, have considered the Medical Care Services Component of the Consumer Price Index (CPI), whereas other States will use the more general inflation rate reflected in the national CPI figures as a target for annual rate increases. A somewhat broader approach than strict adherence to certain formulas or indices will likely guide at least some of the plans' adjustment processes.

In addition to inflation measures, a number of BC plans also examine the actual charges submitted by their hospitals for the different DRG categories. Arizona BC, for example, compares a hospital's total annual charges per DRG to that hospital's peer group's mean charge per DRG before making any final adjustments. There is debate in a number of States as to whether to continue this subjective approach to rate adjustment or whether to move toward a fixed formula approach such as that used under Medicare. Missouri, Nebraska, and Mississippi had not finalized their rate adjustment guidelines as of September, 1985.

vii. The Impact of BC DRG Plans

Only four of the BC plans have been operating for at least 1 year and have conducted a formal annual review and rate adjustment. Three of these four plans concluded that reduced hospital charges had warranted, on the average, a reduction in their respective DRG rates. Arizona recorded the largest average decrease, between 5 and 7 percent, whereas both Kansas and Oklahoma lowered average DRG rates by less than 1 percent. Apparently, these three plans' hospitals had reduced their charges, on the average, by an amount large enough to offset any inflation increase. Florida, by contrast, recorded an average increase in hospital charges, after considering inflation effects, of between 3 and 4 percent.

Most BC officials indicated that it was too early to have completely reliable data on program performance. Some did, however, indicate that preliminary findings were consistent with original program objectives such as high accuracy in DRG assignment, acceptable readmission frequency, and appropriate outlier classification and payment. Mississippi BC, however, after roughly 2 months, feels that it is paying out more than had been expected although the specific problem areas are, at this point, unidentified. In Mississippi--as in all these States--BC officials will continue to gather data to determine if such preliminary findings hold.

C. Proposed State All-Payer DRG Systems

Prior to 1983, the two operational State all-payer systems that incorporate DRGs in their payment methodology are the New Jersey and Maryland (for some hospitals) systems. The characteristics of these programs have been described earlier. Three other all-payer systems still in the developmental stages--in

Connecticut, Washington, and West Virginia—are also expected to establish DRG-specific rates when implemented.

It should be noted that the design issues discussed earlier with respect to the Medicaid and BC programs—such as hospital peer grouping or outlier policies—must also be addressed in an all-payer DRG system. In addition, one other very important decision must be made concerning all-payer systems: whether to set rates at the same level for all payers.

While a hospital may have one set of charges, historically not all payers have paid the same amounts for similar services. Cost-based payers such as Medicare and Medicaid, as well as some BC plans, have paid less than full charges, while other smaller payers, such as commercial insurers, have been required to pay full charges. In establishing rates for all payers, States must decide whether to emphasize equity and establish one rate for all payers or to allow discounts to:

- Medicare, in order to meet the "actual payments" test described above;
- Medicaid, to avoid a possible large one time increase in expenditures under this program;
- payers offering hospitals costs saving services such as electronic billing or prompt payment;
- competitively oriented delivery arrangements such as PPOs. (The Federal waiver requirements preclude State rate setting programs from interfering with direct negotiations between hospitals and HMOs or competitive medical plans (CMPs); or

- payers who have historically received such discounts, e.g., BC plans.

General descriptions of the potential DRG-based all-payer systems in Connecticut, Washington, and West Virginia are provided below. They identify the extent to which these States have made any decisions concerning their rate discounting policies.

1. Connecticut

In 1984, legislation was adopted in Connecticut calling for the development of a State all-payer hospital rate setting program. Rates for all short-term general hospitals, with the exception of children's hospitals, will be included within the program. Not covered under the program will be mental health facilities and psychiatric or rehabilitation units, until such time as they are included with Medicare's PPS.

The ultimate goal of the Connecticut system is to establish per-admission rates for use by all payers beginning in October 1986. The 468 DRG classification system will be used as the basis for the State's rates and data will be collected and analyzed to develop State-specific relative weights.

These rates will be based on gross inpatient revenue caps established for each hospital by the Connecticut Commission on Hospitals and Health Care beginning in October 1985. These revenue caps will be established by combining: 1) allowable inpatient operating costs in a base year trended forward; 2) approved capital costs; 3) approved direct medical education costs; 4) approved cross-subsidies of outpatient services; and 5) any other costs allowed by the Commission.

Uncompensated care would be an allowable cost under this system.

The base cost per admission allowed for each hospital in the fiscal year beginning October 1985 will be a blended figure, 75 percent of which will be based on the operating cost per admission for the individual hospital and 25 percent on the per admission operating cost for the peer group to which the hospital is assigned. The State has established six hospital peer groupings, based upon: 1) the number of full-time equivalent interns and residents in graduate medical education programs, and 2) the number of inpatient hospital discharges. In October 1986, the blend is shifted to 50 percent hospital-specific, 50 percent per group.

The DRG-based rates to be put into effect for all payers, beginning in October 1986, will include discounted rates to Medicaid and Medicare, with the State requesting a Federal waiver to allow rates for the latter program to be set by the Commission. The discounts will be designed to ensure that Medicaid pays no more than it would have under its previous reimbursement system and that Medicare pays no more than it would have under PPS. Hospitals may also extend discounts to private third party payers for prompt payment of bills and to BC, although each discount agreement must be filed with the Commission and aggregate discount levels must fall within pre-established limits. The rate setting process will not interfere with direct negotiations between hospitals and HMOS, CMPs, and self- insured parties affected by the Employee Retirement Income Security Act pre-emption.

Beginning in October 1985, the Connecticut Commission on Hospitals and Health Care will also establish hospital-specific gross outpatient revenue caps. It

will also be studying the feasibility of developing an outpatient payment system with features and incentives consistent with inpatient payment system.

As of April 1986, HCFA had not received a waiver request from Connecticut for such a system under the Authority of Section 1886(c) of the Social Security Act. It is uncertain whether Connecticut will apply for a waiver.

2. Washington

In 1984, the Washington State legislature directed its State Hospital Commission to prepare a design for a DRG-based all-payer rate setting program. In October 1984, the Commission completed a preliminary report that examined various design issues and recommended certain options.

The Commission's study called for the development of a system that would establish hospital-specific DRG rates based upon a blend of the hospital's historic costs with that of peer groups. The basis for the establishment of these peer groups has yet to be developed. To determine the hospital-specific cost component, a case mix index and an average per-admission operating cost would first be developed for each facility and factored together to yield a hospital-specific adjusted cost per admission. The hospital-specific portion of the DRG rate is then calculated by multiplying the facility's adjusted average cost by the relative weight for each DRG. A similar process would be followed to develop the peer group rates. These two rates are then blended according to the appropriate balance to yield the actual base rate. To this amount, other costs, such as capital, would be added.

Although this possible outline for a DRG all-payer system has been developed, discussions with Washington officials indicate that the political pressure for adoption of an all-payer system has been diminished and the likelihood of implementation of such a system in the near future is not very high.

3. West Virginia

In 1983, the West Virginia legislature established the West Virginia Health Care Cost Review Authority to establish a prospective payment system for the State's acute-care hospitals. Although the enabling legislation directed the Authority to seek a Federal waiver to include Medicare within the system it developed, during its first several years the Authority did not focus on establishing rates for either the Medicaid or Medicare programs.

The Authority is now in the process of developing an all-payer prospective payment system that will include both Medicare and Medicaid. This system, which is expected to be implemented in July 1986, would set rates on a per admission basis and use the 468 DRG case classification system. Although all details of the State system have yet to be finalized, initial decisions call for the development of a set of State-specific DRG relative weights using data from the Medicare cost reports and UB-82 claims data for all payers.

DRG-specific prices for operating costs will be calculated for each hospital in the following manner. An average cost per admission is calculated for each hospital after removing the costs not to be included in the base DRG rate (capital and medical education). This average cost is then adjusted by the case mix index developed for that hospital, which is based on the distribution of the facility's

admissions across the DRG categories and the relative weights of these categories. Capital and medical education costs are then added back in to arrive at a final hospital-specific base rate. The actual rate paid for each DRG is the product of the DRG relative weight and this base rate.

The Authority is currently undertaking a study to measure differences in resource consumption for similar case classifications across the different payers in an effort to determine if, and to what degree, its system should incorporate rate differentials across payers.

As of April 1986, HCFA had not received a waiver request from West Virginia for such a system under Section 1886(c) of the Social Security Act. It is uncertain whether West Virginia will apply for a waiver.

D. Summary and Conclusions

The information presented in this chapter can be summarized in the following points:

1. As a result of the reduction in health care inflation and the increased interest in promoting competitively-oriented approaches, the political pressure for the adoption of State all-payer systems appears somewhat reduced over the past few years. However, those States recently enacting or seriously considering an all-payer rate setting system have indicated a strong interest in utilizing a DRG-based approach.

2. With respect to incorporation of specific Medicare measures, such as prices or weights, within an DRG-based all-payer system:

- use of Medicare prices for all payers would likely result in substantial increases in amounts other payers pay for certain cases;
- use of Medicare relative weights for all payers would alter substantially the amount paid by other payers for a substantial number of cases, such as normal deliveries.

For these reasons, unadjusted Medicare prices and weights do not appear appropriate for a general population.

3. It is technically feasible for States to develop data bases that would allow them to develop DRG-based rates for all payers.

The development of such data bases would require the collection and analysis of considerable amounts of information on individual case characteristics and facility finances, and would represent a substantial undertaking in almost all jurisdictions. However, State governments are becoming increasingly more active in the collection, analysis, and dissemination of health care utilization and cost data.

4. An important decision in the development of an all-payer system is whether to establish the same rates for all payers or to set a maximum price and allow discounts to be granted in certain cases. Discounts might be granted for the following reasons:

- to keep Medicare expenditures within levels needed to maintain Federal waivers;
- to reflect charge discounts historically received by certain payers (e.g. BC, Medicaid); or
- to compensate payers for certain cost-saving practices (e.g., electronic billing, prompt payment of claims).

Decisions on discount policies will have important implications concerning cross-payer equity and cost shifting, the ability to cover such costs as uncompensated care, the development of competitively-oriented delivery system alternatives, and the provision of efficiency incentives for low cost institutions.

5. While there are some strong similarities among existing non-Medicare DRG systems, substantial variation also exists in certain policy areas across these systems. These programs use different approaches and measures for establishing base DRG rates and for defining, among other things: hospital peer groupings, case outliers, capital and medical education costs, and transfer policies. No evidence exists that indicates which of these different options represent the optimal approach. Rather, they represent responses to the unique political and environmental circumstances encountered by each payer. The political and technical need for such flexibility should be considered when deciding whether the Medicare PPS methodology might be extended to all payers across the nation.

CHAPTER III

COST SHIFTING AS A RESPONSE TO HOSPITAL'S FINANCIAL NEED: Does All-Payer Regulation Matter?

Stephen Zuckerman with Jack Hadley of Georgetown University and John Holahan of the Urban Institute were co-investigators for the research presented in this chapter and were significantly assisted by Marsha Silverberg of the Urban Institute.

COST-SHIFTING

INTRODUCTION

The Health Insurance Association of America (HIAA), the trade association for commercial health insurers, has vigorously contended for the past several years that insurers that do not pay hospital charges--Medicare, Medicaid, and some BC plans--are paying less than the cost of treating their beneficiaries and are causing hospitals to "shift costs" to charge-paying patients. The implementation of PPS has created additional concerns regarding the level of Medicare payments. If PPS rates impose severe financial hardship on hospitals, then cost-shifting could create unfair burdens on commercial payers. Such a scenario might suggest that the rates paid by all payers may need to be controlled. One way to accomplish this would be to extend PPS to all payers. However, if cost-shifting is limited or if PPS is not creating a financial strain on hospitals, then the reasons to protect commercial payers with rate regulation would be less compelling.

The fact that payment differentials exist among the payers is well documented and is often cited as prima facie evidence that cost-shifting occurs. However, the precise meaning of cost-shifting and the degree to which hospital charges can be altered to make up for revenue shortfalls are issues upon which there is less agreement. HIAA believes that all-payers rate setting could lead to more equitable payment rates among payers. It maintains that if all payers paid charges, commercial payers' relative positions would be improved. It is possible, though,

that their absolute position could be damaged. Payers who currently pay less than charges may be inducing hospitals to contain costs (assuming cost-shifting is not automatic), which in turn may lower the level of charges. If all payers actually paid charges, these incentives might be lost and greater inefficiency might be created. Although some State's laws or regulations establish limits on mark-up differences among payers, there has been no empirical study, that has analyzed the relationship between rate setting, all payer or otherwise, and a hospital's ability to shift costs.

In this chapter of the report, we evaluate HIAA claims about cost-shifting in the broader context of hospitals' responses to revenue needs. Particular focus is given to the effect all-payer systems have on these responses. The major findings of this study can be summarized as follows:

- Cost-shifting, the adjustment of commercial markups in response to revenue needs, appears to occur, but is not widespread and only partially makes up revenue needs. We find that only hospitals with well below average shares of commercially insured days tend to shift costs at all.
- This limited ability to shift costs is not affected by all-payer regulation.
- When commercial payers' rates are included under the regulatory program, hospital markups to commercial payers appear to be contained. However, there is no evidence to suggest that commercial rates are contained as the result of a reduction in the amount of cost-shifting.
- By limiting inpatient payment rates, regulation causes hospitals to contain costs, seek greater revenues from outpatient departments, and accept lower margins.
- Current regulatory programs do not seem to be causing reductions in the amount of charity care a hospital provides.

Prior Research

The literature on cost-shifting is considerably newer and less conclusive than

that on rate setting. Cost-shifting has been viewed, by several authors, as an outcome of underpayment by certain payers for hospital services. How this underpayment is measured and what hospitals do in response to it are areas where cost-shifting studies diverge. Johnson, Madson, and Aquilina (1984) believe underpayment results from certain payers not paying in full the prices a hospital charges. This, they suggest, causes the hospital to raise all of its charges which, in effect, raises charges to other payers. Meyer (1983) contends that cost-shifting "occurs when hospitals charge some patients more for the same service than others," i.e., private patients more than public patients. However, Cohodes (1984) points out the definitions that use the word "charges" to define cost-shifting confuse rather than clarify, since charges do not necessarily reflect costs. Cohodes implies that hospital "charges" (prices) might diverge from costs to a great degree due to decisions by administrators, trustees, and physicians.

Cohodes views the phenomenon as one in which hospitals "modify their pricing structure to generate enough revenues to meet their own objectives." These objectives allow the hospital to cover its basic costs, bad debts, charity care, and discounts (contractual disallowances), and still produce some margin. Cohodes goes on to say that even if all payers paid full costs, hospital decisions regarding allocating charity care could still result in considerable cost-shifting.

The definition upon which HIAA bases its cost-shift estimates has more of a system-wide flavor to it. For computational purposes, HIAA defines cost-shifting as the difference between the amount the public sector would pay if both the public and private sector paid on the same basis and the actual public sector payments. HIAA believes it would be appropriate for each payer to pay a share of net hospital revenues equal to its share of gross hospital revenues (charges), i.e.,

this is the payer's "fair share" of net revenue. For 1984, this public sector underpayment was estimated at $8.8 billion by HIAA. As fair share is defined by HIAA, the entire $8.8 billion was shifted to private sector payers (including BC). Sloan and Becker (1984) applied the HIAA definition in their analysis and, using an alternative methodology, estimated the size of the 1979 cost-shift at $1.5 billion, one-half of the HIAA estimate for 1979 of $3.0 billion. Their analysis concludes that, while a sizeable amount of cost-shifting exists, hospitals are not able to fully shift costs from one payer to another and fully recover all of their costs.

Two recent studies have tried to modify both the conceptual and empirical context in which cost-shifting is viewed. First, Foster (1984) presents a theoretical model of hospital behavior that allows for the derivation of potential responses to PPS. The model assumes that hospitals maximize revenues net of costs. No empirical evidence is presented. He concludes that reductions in Government payment rates should affect private payers similarly under both prospective and retrospective systems, i.e., basically no effect. In the long run, private patients would be indifferent to Government payment policies unless hospital bankruptcy is threatened. In the short run, lower Government rates act as a downward shift in demand and cause the hospital to operate at a point of lower total volume, lower marginal cost and, as such, lower private prices. This runs counter to conventional views of cost-shifting.

The second study, by Hadley and Feder (1984), is an empirical study of how hospitals' commercial revenues (relative to costs) responded to changes in the need to cost-shift between 1980 and 1982. The study is unique in that it does not measure the extent of cost-shifting through cross-sectional variation in payment rates, but rather through changes in payment rates over time. As such, it considers

the ability to cost-shift in a dynamic rather than a static context. To determine how these changes in payment rates are related to a hospital's need to cost-shift, Hadley and Feder develop an index of need to cost-shift. The index is constructed so as to equal the target markup (ratio of revenues per day to cost per day) that commercial payers would have to pay in order for the hospital to offset differences between revenues and costs for other patients, and between nonpatient care revenues and costs. The analysis, using the index, is based on the notion that if hospital charges are structured so as to result in cost-shifting, then hospitals must factor the differences between expected revenues and expected costs into their charge calculations. Details of this index will be discussed later in this report.

Hadley and Feder concluded that, between 1980 and 1982, changes in commercial markups were not sufficient to offset the sum of net revenue reductions as measured by their index. In addition, they found that growth in average commercial markups was about the same among hospitals whose need grew between 1980 and 1982 as among hospitals whose need to cost-shift fell. However, there was substantial variation within each need group. Both increases and decreases in markups were observed independent of the need to cost-shift. Their results suggest that raising markups to commercial payers may not be the safety valve for hospitals' financial needs, as implied by the HIAA cost-shifting scenario.

The general consensus definition from the literature is that cost-shifting is a process by which hospitals adjust their charges (primarily to commercial insurers or self-pay patients) in an effort to recover revenue shortfalls. The shortfalls may be due solely to low payment rates by certain payers, as HIAA and others contend, or

to a more general financial need, as suggested by Hadley and Feder. In the Hadley and Feder context, revenue shortfalls could be created, for example, by high levels of charity and bad debt. Among the three studies that use national data to estimate the extent of cost-shifting, we find three divergent sets of results. HIAA finds that hospitals can engage in what could be termed "perfect" cost-shifting, i.e., every dollar that public payers pay below their "fair share" is shifted to the private sector. Sloan and Becker suggest that hospitals, at best, can accomplish only "partial" cost-shifting. Hadley and Feder show that cost-shifting is not a significant consequence of a hospital's need for revenues. Given these results, we believe that whether or not hospitals can actually cost-shift and to what extent regulation affects their ability to do so remain open to questions.

The remainder of this chapter is organized as follows: We start by reviewing the primary data used in this analysis. In the next section, we develop a conceptual framework within which the cost-shifting issue can be analyzed. A description of the Hadley and Feder index of need to cost-shift is included in this section. We then present the findings of our empirical analyses of the cost-shifting issue in terms of the responsiveness of commercial markups to hospital's needs to cost-shift. We follow this with findings on other responses to financial need that a hospital might undertake. We conclude with a discussion of some aggregate data on recent trends in hospital revenues that provide some preliminary post-PPS evidence on cost-shifting.

DATA

The hospital data used in this chapter were drawn from AHA/Urban Institute (UI) Survey of Medical Care for the Poor and Hospitals' Financial Status (AHA/UI). The survey instrument was fielded for fiscal years 1980, 1982, and 1984. The 1984

data base is not final at this time. Throughout this study, only short-term, general hospitals were considered. To be certain that all expenses and revenues reported were for hospital services, only facilities without separate long-term care units are used.

To carry out the cost-shifting phase of this report, data on revenues and utilization by source of payer are required. These data are not available from the AHA Annual Survey, the AHA's ongoing annual survey program. Fortunately, these data are contained in the AHA/UI survey. The survey instrument was sent to over 2,000 hospitals including all short-term non-Federal hospitals of 100 or more beds plus a random sample of approximately 450 smaller hospitals. Hospitals were asked to provide information on inpatient days, gross patient care revenues (charges), and net patient revenues (collections) by primary source of payment, nonpatient care revenues, deductions from charges for charity and bad debt, and total costs, broken down into inpatient, outpatient, and all other operating and nonoperating costs. All data were self-reported by the hospitals.

The analysis file for this chapter of the report contains only those hospitals reporting reasonable, internally consistent data on the breakdown of inpatient days, admissions, and revenues by payer in both 1980 and 1982, i.e., the sum across payers had to be within 5 percent of the total value reported. Not enough proprietary hospitals met these criteria to allow for their inclusion in this section. Public hospitals were also excluded from the cost-shifting section since their pricing objectives and access to general tax revenues may differ substantially from private hospitals. Hence, the analysis may not be representative of proprietary or publicly owned hospital experience and behavior. The final cost-shifting file

included 204 private, not-for-profit, short-term general hospitals, approximately 9 percent of the relevant universe. As shown in Table III-1 the hospitals in this file were similar to the universe of private, not-for-profit, short-term general hospitals with respect to teaching status, occupancy rates, and proportions of care provided to Medicare and Medicaid. Some differences with respect to geographic distribution, community size, and bedsize do exist. Due to the size of the sample, there are some limitations in the analysis described below. For example, it was impossible to examine hospital performance on a State-by-State basis with any reasonable degree of statistical confidence.

COST-SHIFTING

Prior research on cost-shifting leaves us with the notion that a hospital's primary response to financial need would be to adjust its pricing structure. HIAA suggests that, without these adjustments, hospitals would be forced to accept lower margins when faced with revenue shortfalls in specific areas of operation. This view, however, significantly limits consideration of a wider range of actions that may be available to hospitals. To consider the potential actions a hospital might take, it is useful to think of those factors that enter into determining the hospital's total margin. We can write:

(1) $TM = (R_i - C) * D_i - CHBD + NPC + OPD$

where

TM = total margin;

R_i = revenue per inpatient day from the i^{th} payer;

C = cost per inpatient day (assumed constant for all payers; see Sloan

and Becker (1984));

D_i = number of inpatient days for the i^{th} payer;

CHBD = charity and bad debt costs;

NPC = net revenue from nonpatient care sources (including philanthropy); and

OPD = net revenues from the outpatient department.

This equation is not designed to be an all-inclusive accounting identity, but rather serves to identify major areas in which a hospital may make changes when confronted with financial pressures.

Suppose that rate setting operates by restricting R for all regulated payers. Cost-shifting, as described by HIAA, would imply that a hospital's primary means for dealing with this situation would be to try to raise R for commercial (or non-regulated) payers. As equation (1) suggests, a number of other scenarios could be played out by the hospital.

1. The hospital could respond to regulation by lowering C (e.g., Coelen and Sullivan (1981) and Sloan (1981)).

2. If R is driven below the marginal cost of treating certain patients, D might be reduced. However, if R is reduced, but stays above the marginal costs of an additional day, D might be increased. These responses with respect to days could, in reality, differ by payer.

3. The level of charity care and bad debt could be reduced by curtailing charity admissions or by adopting more aggressive collection methods.

4. Revenues from philanthropic sources, previous hospital surpluses, county grants, and other nonpatient care activities could be tapped to offset the regulatory constraints.

5. Outpatient departments could be expanded, if they tend to generate positive net revenues. However, if outpatient services lose money for a hospital, there would be an incentive to reduce their level. Incentives would also exist to lower costs in this area as well.

6. Finally, the hospital could simply allow TM to fall.

Table III-1

Selected Characteristics of Analysis and Universe Hospitals, 1982

Hospitals Characteristics	Analysis Hospitals (N=204)	Universe Hospitals (N=2260)
Distribution by Type of Regulation (%)		
Mandatory Commercial Regulation	25.9	21.7
All Others	74.1	78.3
Disribution by Region (%)		
Northeast	26.0	25.4
North Central	38.2	33.1
South	28.0	26.5
West	7.8	15.0
Distribution by Size of Community (%)		
Population over 1,000,000	33.3	36.2
Population under 1,000,000	43.1	34.4
Non-Metropolitan Area	23.6	29.4
Council of Teaching Hospitals (COTH) Member (%)	14.2	9.4
Average Number of Beds	330	254
Average Occupancy Rate (%)	78.7	74.1
Medicare Days (%)	43.2	45.7
Medicaid Days (%)	8.5	8.5

SOURCE: Analysis file was drawn from the AHA/Urban Institute Survey of Medical Care for the Poor and Hospitals' Financil Status. The data for the Universe hospitals are from the AHA Annual Survey.

Therefore, concerns about cost-shifting need to be viewed in the context of all potential hospital responses to rate controls.

The two basic questions we address within this analysis are: Does cost-shifting exist and to what degree? And, does all-payer regulation affect hospitals' ability to shift costs? Recall that HIAA contends that all-payer systems should reduce cost-shifting substantially. However, since cost-shifting is a strategic adjustment of commercial rates or charges by hospitals, any regulatory system that controls these rates could reduce cost-shifting.[1] Since an all-payer approach does not imply that all payers pay the same rate, systems that regulated all payers except Medicare could be as successful in reducing cost-shifting as all-payer systems. In addition to the all-payer States--New Jersey and Maryland--New York, Massachusetts, Wisconsin, Washington, and Connecticut all had mandatory regulation of commercial insurers or charges between 1980 and 1982. All of these States will be treated as having "mandatory commercial regulation" and effectively controlling commercial rates during the study period. One of the real questions of interest, then, is "Does mandatory commercial regulation affect hospitals' ability to shift costs?"

Since commercial rates have been at the center of the cost-shifting debate, we start our analysis by exploring how and why these rates change. The other potential responses to financial need will be considered later in this chapter. The percentage markup to commercially insured patients is the key outcome variable. This markup is defined as average revenue per commercially insured inpatient day as a percentage of average cost per day. Overall average cost per day is used as

[1]Cost-shifting could also be reduced by any actions on the part of commercial payers that allow them to negotiate and have more control over their rates.

the basis for commercial markups since Sloan and Becker (1983) have shown that average cost per day does not vary with payer mix across hospitals. If commercial markups are responsive to a hospital's revenue needs, then evidence of cost-shifting would exist.

While many analysts seem to view the Medicare, Medicaid, and BC payment rates as the prime motivators of cost-shifting, we believe that the index developed by Hadley and Feder (1984) is a better measure of hospitals' true need to cost-shift. The formula for the index is

$$\text{Index} = \frac{\text{financial need per commercial day}}{\text{average cost per day}} + 1 * 100.$$

This index not only includes measures of revenue shortfalls (including charity care and bad debt), but also takes into account the average cost per inpatient day and the number of days of care provided to commercially insured patients. The latter variable is particularly important. For two hospitals with identical costs and revenue shortfalls, the hospital with fewer commercial days would have to shift costs to a greater extent than the hospital with more commercial days.

If the hospital breaks even on the sum of its care to noncommercially insured patients and all other activities, then its financial need is 0 and the index value is 100. This implies that the revenues the hospital has to raise from commercially insured patients should be about equal to the costs of their care and, therefore, the percentage markup should be about 0. If the need to cost-shift is high, then the index will be greater than 100. For example, a value of 125 would imply an expected percentage markup of revenues above costs per commercially insured patient day. It should be emphasized, however, that the index is not a precise

pricing formula, but rather a means of identifying hospitals with apparently different needs to cost-shift. Since the index is a new development in the cost-shifting literature, we will review it in some detail here.

To compute the index of need to cost-shift, Hadley and Feder first determine hospitals' revenue needs. These needs are assumed to be the sum of three components:

(1) the costs of uncompensated care (charity and bad debt);

(2) the difference between costs and revenues for the treatment of inpatients covered by Medicare, Medicaid, and BC; and

(3) the difference between nonpatient care expenses and revenues.

Item (2) was computed separately for each payer. Inpatient costs by payer were estimated by multiplying each payer's inpatient days by average cost per day for all patients, again using the assumption that costs per day are approximately the same across payers. The sum of costs minus revenues across these three payers is an estimate of how much the hospital lost (or made) by providing care to noncommercially insured inpatients.

The nonpatient care component of the index is included by Hadley and Feder for two basic reasons. First, some hospitals receive philanthropic or Government grants specifically to offset the costs of charity care. The greater these grants (or any other nonpatient care surplus), the lower the need to cost shift would be. Second, any nonpatient care activities that a hospital wishes to finance (research, education, community service, or nonhospital enterprises) could be funded out of commercial revenues or surpluses from other payers and, therefore, put pressure on markups. In fact, any nonpatient care account surpluses would strengthen a hospital's financial position and would reduce the need to cost-shift.

One factor explicitly omitted from this index is the hospital's target financial margin. Hospitals may attempt to finance future construction with internal funds and set high margin targets. Alternatively, hospitals with large reserves could accept lower margins in periods of economic downturn or when subject to rate regulation. While margin targets are possible, the survey data do not provide a reliable method of identifying these targets. Hadley and Feder made several assumptions about possible margin targets, but found their omission from the index did not alter any of their substantive conclusions. In effect, the index without margin targets measures the need to cost shift in order for the hospital to break even.

Since hospitals differ with regard to the number of days of care provided to commercially insured patients, Hadley and Feder express the revenue needs on a per commercial day basis. Thus, the resulting index simultaneously takes account of how much money a hospital might estimate it needs to raise from commercially insured patients and the number of such patients from whom to raise those extra funds. To convert the index into the same units as the percentage markup, Hadley and Feder divided each hospital's financial need per commercial day by the hospital's average cost per day, added 1.0 and multiplied by 100.

While the present study relies on the Hadley and Feder index, it differs from their analysis in several important ways. First, we employ somewhat less restrictive methods for screening the data and arrive at a larger analysis file than that used by Hadley and Feder. This larger file produces an adequate sample of hospitals in the regulated States. Second, we model the process by which commercial markups are set using both different theoretical and statistical structures. In particular, we specify and estimate a number of regressions that

allow us to extend the earlier analysis of the relationship between commercial markups and the need to cost-shift. Where this study and the Hadley and Feder results can be compared, the results appear similar. This suggests that both sets of findings are robust with regard to data screening methods and modeling techniques.

Results: Commercial Markups

Table III-2 shows the percentage markups by payer for 1980 and 1982 in States with mandatory commercial regulation (MCR) and in States without these types of controls (NMCR). Within each year, the data show markup differentials by payer qualitatively consistent with earlier studies. In 1980, commercial insurers paid more above costs in MCR States than in NMCR States (23.8 percent versus 19.4), although the difference is not statistically significant. The lowest payer in the MCR group was Medicaid (-6.4 percent below costs), while Medicare was lowest in the NMCR States (paying exactly costs, on average).

Between 1980 and 1982, the change in markups varied significantly by payer and regulatory category. Markups to commercial insurers increased by 10.2 percentage points in NMCR States, but remained fairly constant in the MCR category. At the same time, NMCR Medicaid markups fell by a significantly larger amount (11.5 percentage point reduction) than did MCR Medicaid markups (3.5 percentage point drop). Changes in neither BC nor Medicare markups showed significant variation by regulation.

Table III-2 suggests that as reflected in these AHA survey responses, Medicare payments effectively covered costs. This implies that Medicare was not creating financial burdens of a kind that might lead to cost-shifting behavior. The drop in NMCR Medicaid markups combined with the increase in NMCR commercial rates,

Table III-2

Percentage Markups by Payer, Type of Regulation, and Index of Need to Cost-Shift, 1980-1982

Payer	Mandatory Commerical Regulation			No Mandatory Commercial Regulation		
	1980	1982	Change	1980	1982	Change
Commercial Insurance	123.8	124.4	0.6**	119.4	129.6	10.2
Blue Cross	111.3	110.5	-0.8	114.3	117.1	2.7
Medicare	102.1	102.9	0.8	100.0	98.8	-1.2
Medicaid	93.6	90.1	-3.5*	102.3	90.7	-11.5
INDEX OF NEED TO COST-SHIFT	86.5	101.8	15.3	94.8	104.8	10.0

SOURCE: AHA/Urban Institute Survey of Medical Care for the Poor and Hospitals' Financial Status

** The difference between the hospitals in the mandatory commercial regulation and the hospitals in the no mandatory commercial regulation groups is statistically significant at the 5 percent level of confidence.

* The difference between the hospitals in the mandatory commercial regulation and the hospitals in the no mandatory commercial regulation groups is statistically significant at the 10 percent level of confidence.

compared to the relatively stable patterns in MCR States, could lead one to conclude that in States without regulation hospitals engage in fairly thorough cost-shifting. This pattern is consistent with the HIAA notion that lower public rates cause increased commercial rates. Further support for this could be found in the index of need to cost-shift that shows that both MCR and NMCR hospitals had a need to raise commercial markups (although the changes in the index are not statistically significant), but that only NMCRs did so. However, an equally consistent explanation of these data is that regulation results in smaller changes in markups for most payers, independent of changes in a hospital's need to cost-shift. Put differently, we cannot tell if among either regulatory category those with bigger increases in need raise commercial markups by more than those with small increases (or decreases) in need. To be able to disentangle the effects of regulation from the need to cost-shift, further modeling and multivariate analysis of commercial markups are necessary.

Let us assume that there is some "desired" markup (M^*_{82}) that hospitals would like to charge the patients of commercial payers in 1982. This markup is established on the basis of the 1980 value of the index of the hospital's need to cost-shift (N_{80}), whether or not the hospital is in a State with mandatory regulation of commercial insurers (MCR), and a set of exogenous variables measuring hospital characteristics, the demand for services, and other area attributes (X). We will also attempt to determine if systems that regulate commercial payers alter hospitals' responses to their need to cost-shift. Hospitals will not, in all likelihood, be able to move to this desired markup in the period from

1980 to 1982. There may either be some lag in this adjustment or demand factors may simply limit markup changes. As a result, a partial-adjustment model that says the actual change, $M_{82}-M_{80}$, in markups will only be a fraction of the desired change, $M^*_{82}-M_{80}$, seems appropriate.

The desired markup is never observed. However, since we do observe the determinants of the desired markup, we can derive a linear regression model for the actual 1982 markup based on these determinants and the actual level of the markup in 1980.[2] If cost-shifting is a widespread, though not completely compensatory response to financial need, we would expect the 1980 index of need to be positively related to the 1982 markup. Regulation, on the other hand, would be expected to reduce the 1982 markup. If the all-payer hypothesis put forward by HIAA is true, then hospitals' responsiveness to need will be lower when commercial rates are controlled, i.e., an interaction term between N_{80} and MCR would enter a regression for the 1980 markup with a negative sign.

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[2] Algebraically, we can write this model in the following manner. Let

(1) $M^*_{82} = a + b_1 N_{80} + b_2 MCR + b_3 X$

where a, b_1, b_2, b_3 are parameters to be estimated and the remaining variables are defined as in the text. According to the partial-adjustment framework, we posit that

(2) $M_{82} - M_{80} = p (M^*_{82} - M_{80})$ where $0 \leq p \leq 1$.

M_{80} and M_{82} are the actual markups paid by commercial payers in 1980 and 1982, respectively. Since M^*_{82} is never observed, it is necessary to substitute equation (1) into equation (2) to derive an expression for M_{82} that is only a function of observed variables. We arrive at

(3) $M_{82} - M_{80} = p (a + b_1 N_{80} + b_2 MCR + b_3 X - M_{80})$ or

(4) $M_{82} = (1-p) M_{80} + pa + pb_1 N_{80} + pb_2 MCR + pb_3 X$.

Based on the discussion in the text, a regression based on equation (4) would have $pb_1 \geq 0$ if cost-shifting occurs and $pb_2 \leq 0$ if regulation is successful in containing rates.

The 1980 value of the index is used for two basic reasons. First, it seems reasonable to believe that a hospital will set its 1982 commercial revenue or markup targets based on the most complete financial data it has at the start of 1982. The most complete financial data it has at the start of 1982 would be, at best, from 1981. Due to the fact the financial data tend to be compiled with a long lag, the hospital may still be using a great deal of 1980 data when making 1982 decisions. Not having 1981 data could weaken the relationship between the index and the markup, but its omission is not necessarily crucial. Second, if we used the 1982 value of the index, the only other value available, we would have to treat the variable endogenously. We attempted to do this. However, because of the difficulties we encountered in estimating an instrument for the 1982 index and the reality of a lag in availability of financial data for hospital planning, we chose the specification shown.[3]

The results of estimating equation (4) are shown in column 1 of Table III-3. The specific exogenous variables used are defined in the table. (Note: The coefficients for each of the binary variables should be multiplied by 100 to be consistent with the discussion in the text.) Only two variables exert a significant influence on 1982 commercial markups at the 5 percent level of confidence--the 1980 commercial markup and a dummy variable indicating the presence of MCR in the hospital's State. Hospitals with above average markups in 1980 continue to have above average markups in 1982. The coefficient estimate on the 1980 commercial markup (0.2627) indicates that the adjustment rate, $\tilde{p}$, in the above

[3]The coefficient estimates did not change when an instrument for the 1982 index was used. However, the statistical significance was reduced.

Table III-3

Multivariate Analysis of Commercial Markups, 1982

Independent Variables	Mean Value	Regression Coefficients (t-statistics in parentheses) (1)	(2)	(3)
Commercial Markup, 1980 (M_{80})	1.282	0.2627*** (3.12)	0.2890*** (3.39)	0.2066** (2.44)
Index of Need to Cost-Shift, 1980 (N_{80})	0.927	0.0499 (1.47)		0.1285*** (3.00)
Index Value Range:[a]				
100-125	0.227		0.1130*** (2.65)	
125-150	0.054		0.173** (2.28)	
Over 150	0.074		0.0349 (0.52)	
Interaction between the Index and the Share of Commercial Days as Percentage of Total Days, 1980				-0.5820*** (-2.91)
Mandatory Commercial Regulation (MCR)[a]	0.261	-0.1016** (-2.01)	-0.0889* (-1.79)	-0.1356*** (-2.67)
The variable below represent the exogenous factors discussed as X:				
Geographic Location:[a]				
Northeast	0.261	0.1514* (1.82)	0.1279 (1.54)	0.0767 (0.90)
North Central	0.379	0.0936 (1.29)	0.0947 (1.32)	0.0531 (0.73)
South	0.281	0.0827 (1.03	0.0747 (0.94)	0.0334 (0.42)

(continued)

Table III-3 (continued)

Independent Variables	Mean Value	Regression Coefficients (t-statistics in parentheses) (1)	(2)	(3)
Number of Statistical Beds:[a]				
Less than 100	0.025	-0.0279 (-0.21)	-0.0416 (-0.32)	-0.0184 (-0.14)
Between 100 and 249	0.345	-0.0461 (-0.74	-0.0341 (-0.55)	-0.049 (-0.80)
Between 250 and 399	0.340	-0.0163 (-0.33)	-0.0112 (-0.23)	-0.0224 (-0.46)
Teaching Status:[a]				
Council of Teaching Hospitals (COTH) Member	0.0313	0.0213 (-0.30)	0.0589 (-0.85)	-0.0087 (-0.12)
Medical School Affiliation	0.217	-0.0175 (-0.33)	-0.0094 (-0.18)	-0.0300 (-0.57)
Residency Program (non-COTH, no	0.044	0.0450 (0.48)	0.0619 (0.67)	0.0320 (0.35)
Population of Metroplolitan Statistical Area (SMSA):[a]				
Over 1,000,000	0.355	0.0384 (0.63)	0.0274 (0.45)	0.0584 (0.97)
Under 1,000,000	0.429	-0.0009 (-0.02)	-0.0005 (-0.01)	0.0174 (-0.37)
Proportion of Potential Facilities and Services Available in Hospital	0.520	-0.0324 (-0.18)	-0.0349 (-0.19)	-0.0203 (-0.11)
Per Capita Income, 1980 (deflated)	8,816	-0.000009 (-0.98)	-0.000005 (-0.62)	-0.000009 (-1.10)
Unemployment Rate, 1980	7.61	-0.0063 (-0.93)	-0.0054 (-0.79)	-0.0121 (-1.75)

(continued)

Table III-3 (continued)

Independent Variables	Mean Value	Regression Coefficients (t-statistics in parentheses) (1)	(2)	(3)
Health Maintenance Organization (HMO) Membership per 10,000 Pop., 1981	301	0.00003 (0.90)	0.00002 (0.72)	0.00002 (0.62)
Average Annual Salary for Nurses, 1982	16,861	-0.000003 (-0.63)	-0.000004 (-0.91)	-0.000003 (-0.74)
Average Annual Salary for Other Personnel, 1982	12,445	0.00001 (1.53)	0.00001* (1.71)	0.000009 (1.19)
Intercept		0.8910*** (3.71)	0.8470*** (3.50)	1.1525*** (4.57)
R-Square		0.1621	0.2008	0.1994
Mean of Commercial Markup, 1982	1.28			
Number of Cases = 203				

SOURCES: AHA/Urban Institute Survey of Medical Care for the Poor and Hospitals' Financial Status; and Bureau of Health Professions Area Resource File

a. Binary variables: 1 if hospital has the designated characteristic; 0 otherwise.

***The coefficient is significant at the 1 percent level.

**The coefficient is significant at the 5 percent level.

*The coefficient is significant at the 10 percent level.

partial-adjustment model is about 0.74 (see equation (4) of footnote 2). This indicates that commercial markups adjust rather quickly toward their "desired" level, at least over a 2 year time span. In addition, we find that, other things equal, MCR does exert downward pressure on commercial markups. Holding the 1980 markup and the need to cost-shift constant, we find that markups to commercial payers in MCR States were 10.16 percentage points below those in other States. This is almost identical to the difference observed in the univariate comparison shown in Table III-2.

The index of need to cost-shift in column 1 has only a weak positive effect (coefficient = .0499; not statistically significant) on commercial markups when included in its linear form. In another specification not shown in the table, we included an interaction term between MCR and the 1980 index of need to cost shift (N_{80}). We found no variation in the effect of the index across regulatory groups. Based on this analysis, we cannot reject the hypothesis that cost-shifting is not reduced when commercial payers are regulated.

Given the central role the index plays in this study, two alternative specifications were tested. First, since the Hadley-Feder index is, in fact, an index and not a precise pricing formula, we created a categorical variable based on the 1980 index. The results are shown in column 2 of Table III-3. In this specification, we test whether hospitals with high, moderate, and low needs to cost-shift had varying degrees of increase in commercial markups relative to those with no need to cost-shift. Since the value 100 implies no need to cost-shift, hospitals with indices below that value were compared to hospitals above that value. The over-100 group was segmented as well.

This categorical treatment of the index shows that in certain ranges commercial markups are somewhat responsive to the need to cost-shift. Hospitals with a low need to cost-shift had 1982 commercial markups 11.3 percentage points above those with no need. If these markups fully reflected differences in their need to cost-shift, then this percentage point gap would equal 40.5 (the difference in the average value of the index for hospitals in the under 100 category and those in the 100-125 group). Those with a middle range of need had markups 17.4 percentage points above the comparison group, while their average indices differed by 64.1 percentage points. However, those with the greatest need to cost-shift in 1980 had markups that were not statistically different than those with no need. These results show that if there is a relationship between need and markups it is clearly nonlinear.

We also see that differences in actual markups, as estimated by the regression, do not fully reflect differences in markups that would be projected on the basis of the index alone. Recall that the index is the target markup required by the hospital in order for it to just break even. As such, we can conclude that, even in the ranges where markups are responsive to need, only partial cost-shifting seems to occur. This result is consistent with the findings of Sloan and Becker.

A second alternative to the basic specification (shown in column 3 of Table III-3) involved some additional conceptual modeling. If, as Hadley and Feder suggest, a hospital's ability to shift costs has limits, then the market power of commercial insurers may be a factor in creating these limits. Hospitals may be unwilling to risk losing commercially insured patients as a result of increasing their markups when these patients represent a sizeable share of their business. Therefore, the impact of the index may be conditional on the share of inpatient days accounted

for by commercial insured patients. We included an interaction term between the commercial share of days and the index to allow for this relationship in the regression analysis.

In order to determine the impact of the need to cost shift from this type of specification, the coefficients (shown in column 3, Table III-3) from N_{80} and the interaction term must be combined in an appropriate fashion. This computation has been made for several values of the commercial share of days for illustrative purposes. These results are shown in Table III-4.

Table III-4

Impact of the Index of the Need to Cost Shift on Commercial Markups by Selected Values of the Share of Commercial Days

Share of Commercial Days	Marginal Impact of the Index of Need to Cost Shift on the Commercial Markup[a]	Elasticity of Commercial Markup with respect to the Index of Need to Cost Shift[b]
5 percent	.0994	.0713
15 percent	.0412	.0298
23 percent (average)	-.0053	-.0039
25 percent	-.0170	-.0123
35 percent	-.0752	-.0545

a. Marginal Impact equals .1285 - .5820 * Commercial Share of Days where the numerical estimates are taken from Table III-3, column 3.

b. Elasticity equals the marginal impact multiplied by the mean of the index of need to cost shift (.927) divided by the mean of the 1982 commercial markup (1.28).

Our findings are consistent with the notion that whatever cost-shifting occurs happens only at hospitals with well below average shares of commercial patients. At the average commercial share (23 percent), the index has no impact on markups. At a commercial share equal to 5 percent of patient days, the estimated elasticity of the markup with respect to the index is approximately 0.07. This means that, among hospitals with a 5 percent commercial share, a 10 percent increase in the index would only result in a 0.7 percent increase in commercial markups in the long run. This further confirms that, even among hospitals for whom the need to cost-shift is related to commercial markups, cost-shifting is far less than a perfect safety valve for hospitals to recover revenue shortfalls.

Results: Other Responses to Financial Need

Based on these findings, an obvious question is: If they do not adjust commercial markups so as to make up revenue shortfalls completely, how do hospitals respond to changes in their need to cost-shift? Table III-5 presents data on changes in aspects of a hospital's activities (other than commercial markups) for regulated and nonregulated hospitals. Hospitals in MCR States exhibit patterns different from those in NMCR States. To begin with, revenues per inpatient day increased much more slowly in regulated States than in other States. And as might be expected given earlier research, costs per inpatient day also increased much more slowly in regulated States. Despite this lower rate of growth in costs, average markups to commercial payers did not rise in rate setting States, reflecting the fact that rates per day were held down by regulation. In addition,

Table III-5

Changes in Selected Hospital Characteristics
by Type of Regulation, 1980-1982

Hospital Characteristics	Mandatory Commercial Regulation (n=53)	No Mandatory Commercial Regulation (n=151)
Percentage Change in:		
Revenues per Inpatient Day	27.6%**	38.2%
Cost per Inpatient Day	29.6**	37.8
Admissions	2.8	0.3
Inpatient Days	1.2	-0.4
Change in:		
Index of Need to Cost Shift	15.3	10.0
Markup to Commercial Payers	0.6**	10.2
Charity and Bad Debts (% of total charges)	0.3**	-0.3
Net Outpatient Revenues (% of total revenue)	1.6	0.5
Net Nonpatient Care Revenues (% of total revenue)	-0.9	-0.5
Operating Margin (% of total revenue)	-0.8	-0.1
Total Margin (% of total revenue)	-1.0**	0.2

SOURCE: AHA/Urban institute Survey of Medical Care for the Poor and Hospitals' Financial Status

** The difference between the hospitals in the mandatory commercial regulation and the hospitals in the no mandatory commercial regulation group is statistically significant at the 5 percent level of confidence.

regulated hospitals tended to expand their amount of charity and bad debt charges, while unregulated hospitals contracted this level. This could be due to the fact that several rate setting States make allowances for charity and bad debt in their rate formulas.

Whether as a result of the reduced markups, the increases in charity and bad debt, or some other factor not identified in the table, percent total margins fell by a full percentage point (from 3.0 percent to 2.0 percent) among regulated hospitals but showed slight increases in other States (from 5.5 percent to 5.7 percent). This suggests that hospitals could not fully adjust to the various financial pressures applied by regulation and, at least during the period 1980 to 1982, were forced to accept reduced margins. However, not all regulated hospitals should be viewed as being in the same state of financial health, nor should unregulated hospitals be viewed uniformly. Therefore, to better understand the adjustments hospitals make under regulation, we divide hospitals along the lines of the change in their need to cost-shift; our measure of financial health. This allows us to compare hospitals in similar financial conditions operating both with and without regulation. However, the reductions in margins (an alternative indicator of financial status) do suggest that, on average, regulated hospitals are not doing as well as other hospitals.

Among hospitals in both financial positions, regulation is associated with lower growth in revenues and costs and bigger reductions in total margins between 1980 and 1982 (Table III-6). Somewhat surprisingly, though, regulated hospitals are no more likely to exhibit an increased need to cost-shift than are other hospitals. Approximately 26 percent of the hospitals in each financial category are from MCR States. In fact, growth in revenues per day does not appear to be a large contributor to changes in a hospital's financial status. This indicates that

Table III-6

Changes in Selected Hospital Characteristics
by Change in Index of Need to Cost Shift
and Type of Regulation, 1980-1982

Hospital Characteristic	Hospitals with an Increased Need to Cost-Shift		Hospitals with a Reduced Need to Cost-Shift	
	Mandatory Commercial Regulation (n=32)	No Mandatory Commercial Regulation (n=91)	Mandatory Commercial Regulation (n=21)	No Mandatory Commercial Regulation (n=60)
Percentage Change in:				
Revenues Per Inpatient Day	27.1%**	37.9%	29.3%**	38.6%
Cost per Inpatient Day	31.6**	40.0	26.5**	34.4
Admissions	3.5	-0.8	1.8	1.9
Inpatient Days	0.9	-1.1	1.7	0.6
Change in:				
Index of Need to Cost-Shift	63.5**	33.5	-58.2*	-25.6
Markup to Commercial Payers	2.6	10.0	-2.5*	10.4
Charity and Bad Debts Care (% of total charges)	0.5	0.3	0.1**	-1.1
Net Outpatient Revenues (% of total revenue)	2.9**	0.7	-0.3	0.1
Net Nonpatient Care Revenues (% of total revenue)	-1.9	-1.6	0.7	1.1
Operating Margin (% of total revenue)	-0.8	-0.6	0.7**	1.6
Total Margin (% of total revenue)	-1.3	-0.6	-0.4**	1.4

SOURCE: AHA/Urban institute Survey of Medical Care for the Poor and Hospitals' Financial Status

** The difference between the hospitals in the mandatory commercial regulation and the hospitals in the no mandatory commercial regulation group is statistically significant at the 5 percent level of confidence.

* The difference between the hospitals in the mandatory commercial regulation and the hospitals in the no mandatory commercial regulation group is statistically significant at the 10 percent level of confidence.

regulation, per se, should not be viewed as a primary cause of financial hardship for hospitals. Hospitals generally seem to have been able to restrain growth in costs in response to controls on their revenues. Once again, these data show that differences in the change in commercial markups are much more a function of regulation than they are of changes in the need to cost-shift, i.e., increases in commercial markups are lower in regulated States than in unregulated States for hospitals in either financial category. It is interesting to note, however, that the regulatory agencies seem to allow commercial markups at hospitals with increased need to rise somewhat more than those at other hospitals, though the difference is not significant.

The major new findings contained in Table III-6 are in the areas of admissions and net outpatient and net inpatient care revenues. Admissions increased by 3.5 percent in the MCR hospitals with increased financial need between 1980 and 1982 as compared to a 0.8 percent reduction in the comparable NMCR group. This finding appears to suggest that regulated hospitals with deteriorating financial positions may try to expand their flow of patients by increasing admissions. However, the evidence is clearly not conclusive. First, the data do not show that hospitals "recruited" patients. Rather, they show a simple difference in the increase in admission rates that could be due to a variety of factors outside of the hospitals' control. Second, even if hospitals did actively seek additional patients, the short-term nature of the data preempts conclusions about increasing admissions as a long-run financial solution. Under either circumstance, it seems clear that hospitals do not respond by reducing admissions. Hospitals with improving financial positions showed no differences in admission rates across regulatory categories. None of the observed differences in the percentage change in inpatient days were significant either.

Outpatient revenue (as a share of total revenue) expanded by the greatest amount among regulated hospitals with an increased need to cost-shift. Either by raising outpatient rates, increasing volume, or by lowering costs, these hospitals increased net outpatient revenue from near zero in 1980 (0.3 percent) to 3.2 percent of total revenues in 1982 (net change 2.9 percent). Not only is this the greatest increase observed among the groups shown, but the 3.2 percent in 1982 makes this group the one in which outpatient revenues appear most important. Perhaps some regulatory commissions allow more generous outpatient prices, or coverage of charity costs is what improves such revenues. Unregulated hospitals with an increased need to cost-shift also appear to seek to increase revenues from outpatient departments (0.7 percent), although their change is much smaller when compared to the regulated group (2.9 percent). These data show that when a hospital's financial position deteriorates one response it undertakes is to generate more net revenues from its outpatient departments, particularly when its inpatient rates are regulated.

Adjustments to net nonpatient care revenues also take place. In this case, differences between regulated and unregulated hospitals are not statistically significant. However, for both regulatory categories, hospitals with an increased need to cost-shift experience significantly greater reductions in nonpatient care revenues as a percentage of total revenues than other hospitals. Since the index is defined so as to translate reductions in nonpatient revenues into increases in the need to cost-shift, this result is somewhat tautological and should be viewed as more cause than response. If one takes the reduction in nonpatient revenues as a response, then we have further evidence that when financial needs arise hospitals do not solely change markups and may spend out of their surpluses to cover these needs. However, viewed as a cause of the revenue needs, the reductions in nonpatient care dollars show that needs to cost-shift can and do arise for reasons other than shortfalls in the rates paid by public payers, the primary reason

identified by HIAA.

While our analysis of commercial markups found that regulation does not alter the relationship between the need to cost shift and these payment rates, it appears that regulation may alter other responses. The strategy among hospitals in MCR States appears to be to allow admissions to expand, contain costs, and seek greater outpatient revenues than similar hospitals in NMCR States. In terms of equation 1, it appears that, when R is controlled by rate setting authorities, hospitals with financial need reduce C, accept more inpatients (increase total D), and add to OPD. In addition, we find the CHBD tends to expand in regulated environments relative to unregulated ones, particularly among hospitals with improving financial status. This latter strategy is a likely result of the specific allowances for charity care that many regulated rates include.

Discussion

Concerns about cost-shifting have grown as a result of the introduction of Medicare PPS. Commercial insurers fear that if Medicare gradually reduces its payment rates for inpatient services, hospitals will compensate by increasing charges, the basis of their payments from other payers. For several years now, HIAA has been urging adoption of all-payer ratesetting in order to curtail hospitals' ability to shift costs in this manner. The results of this study, however, indicate that hospitals' charges to commercial insurers are only mildly related to hospitals' financial needs. It also appears that, for any relationship to exist, commercial payers must be a fairly inconsequential part of the hospital's patient load, i.e., lack market power. In addition, we find no significant evidence to indicate that responses to need are a function of regulatory status.

Our finding of, at best, minimal cost-shifting does not mean that all-payer regulation might not be a benefit to commercial insurers. We find that when commercial rates are regulated, even if Medicare is not, commercial markups increase at a significantly lower rate than they do without these controls.

This study covers a period prior to PPS. While we found little evidence of widespread cost-shifting, we are aware that PPS represents so large a change in Medicare's hospital reimbursement methodology that it may be difficult to extrapolate from our results to general predictions about the effect of PPS. To the extent that PPS will not create needs well in excess of those represented in our data, it should not hurt commercial payers by inducing great amounts of cost-shifting.

Hospitals might adjust to any PPS-induced financial needs by changing other aspects of their operation. Based on the data shown here, it appears that hospitals may attempt to expand admissions, generate additional revenues from the outpatient side, or cut costs. If PPS causes hospitals to create more efficient outpatient delivery systems as the means for increasing the net revenues they earn, then it may have a desirable, though unplanned, side-effect. However, if hospitals seek outpatient revenues by simply increasing charges or volume (by treating former inpatients in a new setting), then PPS may be causing shifts in provision sites without realizing any real savings in total Medicare outlays. The increases in outpatient revenues that occur when inpatient rates are regulated, though, do not appear sufficient to offset all revenue shortfalls, given the observed negative impact that regulation has on margins.

We realize that a shortcoming of this analysis is that our data are drawn entirely from the pre-PPS era. Unfortunately, similar data on hospital revenues by type of payer are not yet available beyond 1982. However, in light of the importance of this issue, we have gathered some data on hospitals' revenues, days, and expenses that are available through 1984. These data will be used to uncover any obvious problems that PPS may be creating with respect to cost-shifting, but should not be viewed as conclusive evidence.

At present, the only hospital data available that might be relevant for this study are at a highly aggregated level. The AHA has provided us with data from its Hospital Panel Survey for 1980 through 1984 on inpatient revenues, days, and admissions covering all United States hospitals and all sources of payment. No disaggregation by hospital type, area, or payer is possible. Reasonably comparable data on Medicare patients were provided by HCFA. Since Medicaid is included in all sources of payment, it is not correct to conclude that differences between Medicare and all sources are due solely to differences between Medicare and private payers. However, this is the only available data and it is true that private payers dominate the non-Medicare part of the all sources data.

To determine if PPS has created any indication that cost-shifting may be a problem, we compare Medicare inpatient revenues (total, per day, and per admission) to total inpatient revenues. One hypothesis could be that, in the presence of cost-shifting, reductions in Medicare revenues (or the rate of increase in Medicare revenues) would not lead to reductions in total revenues. Presumably, hospitals could make up any Medicare revenues by raising charges to other patients. While this hypothesis represents an oversimplification in light of the

Hadley-Feder index of need to cost shift, it may serve as an early warning that hospital responses to need could be different in the PPS era than in earlier periods.

Data on total inpatient revenues, average inpatient revenues per day, and average inpatient revenues per admission are contained in Table III-7. Rates of change in Medicare payments between 1980 and 1984 tended to exceed those from all sources in total and on a per-day basis. All sources could be held down due to slow growth in Medicaid rates. On a per admission basis, Medicare payments grew more slowly than total payment from 1980 to 1982. After 1982, Medicare rates per admission grew at the same or faster pace that total rate. Of particular note is the fact that as hospitals were coming under PPS (1983-1984), Medicare payments per admission rose by 9.3 percent as compared to an 8.5 percent increase overall. This suggests that non-Medicare payments per admission rose less than Medicare payments. Therefore, despite the fact that Medicare payment growth (per admission) has fallen in the first year of PPS relative to previous years, little clear evidence exists in these data to indicate that other payers are being subjected to greater cost-shifting.

Another approach we tried to take to explore cost-shifting under PPS was to get data directly from commercial insurers. These data could have provided more direct information on how their payment rates may have changed under PPS. Unfortunately, after meeting with staff at HIAA, we concluded that unified data on commercial insurer were not readily available. Data are available from insurance industry sources that deal with the profitability of health insurance as a line of business. However, changes in profits between 1983 and 1984 could not form the basis for even a weak test of the cost-shifting hypothesis. Factors such as variation in accounting procedures and changes in premiums, coverage,

Table III-7

Inpatient Revenues from Medicare and All Sources
1980 through 1984

Total Inpatient Revenues (millions)

	Medicare		All Sources	
	Amount	Percentage Change	Amount	Percentage Change
1980	$24,002	--	$ 69,140	—
1981	28,357	18.1%	81,765	18.3%
1982	33,761	19.1%	95,037	16.2%
1983	39,400	16.7%	104,361	9.8%
1984	42,384	7.6%	109,145	4.6%

Average Inpatient Revenues Per Day

	Medicare		All Sources	
	Amount	Percentage Change	Amount	Percentage Change
1980	$219	—	$256	—
1981	254	16.1%	300	15.8%
1982	296	16.7%	350	16.9%
1983	337	13.9%	395	12.7%
1984	407	20.7%	451	14.4%

Average Inpatient Revenues Per Admission

	Medicare		All Sources	
	Amount	Percentage Change	Amount	Percentage Change
1980	$2,316	—	$1,841	--
1981	2,658	14.8%	2,158	17.3%
1982	3,049	14.7%	2,508	15.2%
1983	3,369	10.5%	2,769	10.4%
1984	3,683	9.3%	3,006	8.5%

SOURCE: Medicare data are from internal HCFA memoranda. Total data are from the AHA Hospital Panel Survey.

utilization, and competition are likely to confound any potentially discernible impact of cost-shifting on a single year of commercial insurers' profits.

Policy Implications

The results presented in this chapter suggest a number of policy implications. The cost-shifting analysis presented in this chapter suggests that claims about the extent and impact of cost-shifting are overstated. At least in the short-run, hospitals only partially adjust commercial payers' rates in response to their financial needs. It also appears that, while commercial payers do benefit from lower markups when their rates are controlled, all-payer programs do not reduce a hospital's limited ability to shift costs. The benefits of rate-setting accrue to commercial payers in much the same way that any buyer would benefit from price controls. The bottom line appears to be that all-payer systems may be effective in providing equitable solutions for financing uncompensated care, but they are not superior on the basis of greater cost containment or lower amounts of cost shifting.

Hospitals faced with increased revenue needs, rather than cost-shifting through increasing commercial markups, adopt several other strategies. Included in these are controlling costs, expanding outpatient revenues, and accepting lower total margins. It does not appear that curtailing charity care is a widespread strategy. These findings, though, represent short-run hospital strategies. The data in this study only cover the first 2 years of the 1980s. In the long-run, hospitals' ability to contain costs or reduce margins may be limited.

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CHAPTER IV
EXTENDING MEDICARE PPS TO ALL PAYERS: POLICY CONSIDERATIONS AND OPTIONS AND CONCLUSIONS

Lynn Etheredge of the Urban Institute contributed many ideas for this chapter.

DISCUSSION

Over the past two decades, health policy debates about rising Medicare (and national) hospital expenses have usually involved proposals which emphasize one or the other of two basic strategies:

Comprehensive Strategies, which would control hospital expenditures for all payers, including the Medicare program. This strategy has been reflected in the national health insurance proposals by the Nixon, Ford, and Carter administrations, the Carter hospital cost containment bill, the Enthoven-Gephardt/Stockman competition plans, State "all-payer" hospital payment systems and legislation which would promote them (e.g., the Kennedy-Gephardt and Heinz bills).

Medicare-only Strategies, whereby the Federal Government would restrain Medicare payment rates alone, with other payers left to act independently. This strategy has been reflected in Medicare's Section 223 provisions, the Ford Administration's Medicare prospective payment legislation, and most annual budget proposals.

The 1970s produced a political impasse on the choice between these strategies. As a result, Medicare hospital spending continued to rise rapidly, from $5 billion in 1970 to $24 billion in 1980, an average annual rate of 17 percent.

Mixed-Strategies. In the past 3 years, however, the Federal Government has acted to slow Medicare's rate of increase in hospital payments. In the Tax Equity and Fiscal Responsibility Act (1982) per case operating cost limits and target amounts

were required. Then, in PPS legislation (1983), the Federal Government adopted a Medicare-only prospective payment strategy as its major (short-term) policy emphasis to deal with the Federal budget deficit. The debate about longer term reform, however, has not been resolved. Current policy also permits waivers for Medicare rates to be set by comprehensive "all-payer" systems subject to the condition that, over a 3 year period, they produce equivalent Medicare program savings.

Thus, the nation is now in a period in which evidence, rather than only hypotheses, is developing to address how well these comprehensive and Medicare-only prospective payment systems work in comparison to each other or to mixed strategies.

Lessons of Experience

The introductory chapter presented two questions, major parts of the broader policy issue about extending Medicare PPS to all payers, which would be addressed:

- o Is Medicare PPS an appropriate model for all-payer system?
- o Do all-payer systems reduce cost-shifting across payers?

As background for a subsequent discussion of strategy options, this section draws together the evidence presented on these points and their policy implications, and also considers a related question of major importance for current decision making:

- o Will States be interested in establishing effective all-payer systems?

Would Medicare PPS Be Desirable Model to Extend to All Payers?

The evidence presented in this report suggests that a straightforward extension of Medicare's PPS to all payers, without major modifications, would not now be desirable.

- The mandatory control and all-payer States, which have been evaluated, all differ substantially from Medicare's PPS system. There is now insufficient evidence to conclude that one prospective payment model is superior to other approaches (Chapter II).

- The Medicare DRG rates and prices would not be appropriate for non-Medicare patients. While DRG classification systems may prove useful, States will have to develop their own data to establish appropriate relative prices and price levels (Chapter II).

- The first year Medicare PPS was effective in restraining spending, but Medicare's spending for hospital benefits grew more rapidly than that of other payers in 1984. Medicare's cost savings were, of course, largely a function of where Congress set the payment rates. But the greater success of other payers in containing (or perhaps reverse shifting) costs suggests that more research on the reasons for these differences is needed before extending Medicare PPS (Chapter III).

Do All-Payer Systems Control Cost-Shifting?

In the past, many hospitals may have been able to raise rates to charge-paying patients, e.g., commercial insurance, to cover costs of charity care and bad debts. For the future, the key issue is whether, as Medicare, Medicaid, and other large payers restrain their payment rates, will hospitals simply "cost-shift" these reductions through higher charges to private sector payers?

The evidence of previous studies reported in Chapter III, while often measuring different concepts of what "cost-shifting" means, has been inconclusive. The new research in that chapter shows that cost-shifting defined as the adjustment of commercial mark-ups in response to revenue needs does occur, but is not widespread and only partially makes up revenue needs. The analysis shows that hospitals also engage in such behavior as increasing outpatient revenues, lowering costs, and accepting smaller margins. Thus, the need to cost shift alone is not a good predictor of whether a hospital will cost shift. The evidence does report, however, some tendency for commercial mark-ups to grow more quickly in unregulated States than in regulated States. From 1980 to 1982, mark-ups to commercial insurers rose from 119 percent to almost 130 percent of average costs in States without mandatory commercial regulation; in the States with mandatory commercial regulation, markups were essentially unchanged (about 24 percent). More recent data are not available with this detail. The Medicare and aggregate data reported below, however, suggest that the private sector was more effective at cost containment or "reverse cost-shifting" than the Medicare program in 1984. Thus, the analysis did not find prima facie evidence that Medicare restraint has recently increased cost-shifting to other payers.

	Percent Change From Prior Year	
Total Inpatient Revenues	1981	1984
Medicare	18.1%	7.6%
All payers	18.3%	4.6%
Inpatient Revenues per Admission		
Medicare	14.8%	9.3%
All payers	17.3%	8.5%

In fact, others have suggested that providers have always found it easier to increase their revenue shares from Government sources (Reinhart, 1985). The HCFA Actuarial Note 85-01, "Exploding The Cost-Shifting Myth," points out that from 1970 to 1984, Medicare's share of total hospital expenses increase by 2.3 percent annually, while the Medicare share of patient days increased by only 1.8 percent annually.

Perhaps the clearest recent evidence on the scant justification for cost-shifting is found in the May 30, 1986 report of the Inspector General, "Financial Impact of the Prospective Payment System on Medicare Participating Hospitals - 1984." That report confirmed earlier AHA estimates that 4 out of 5 hospitals earned profits in 1984. Among 2,099 hospitals studied by the Inspector General, the average profit rate was 15 percent of Medicare reimbursements, a rate equivalent to a return on investment of over 25 percent. (See Appendix 2).

There have also been numerous other indications that other payers have not suffered (and may have benefitted) from the behavioral changes stimulated by the introduction of Medicare's PPS. The Federal Employee Health Benefits programs experienced remarkable declines in hospital use in 1984 among most plans of all types, such that premium decreases for 1985's "Open Season" are common, as are refunds in light of unexpectedly favorable 1984 experience. Similar experiences are reported elsewhere in the private sector. Information reported from the Blue Cross and Blue Shield Association showed decreasing utilization and lower cost growth occurred almost everywhere in 1984. Estimates from the 1984 National Health Expenditures calculations suggest that the growth in hospital benefit payments of private health insurance from 1983 to 1984 was less than 3 percent, the smallest growth in two decades.

Will States Be Interested in Establishing Effective All-Payer Systems?

Just as it is now questionable whether Medicare PPS should be expanded to all payers if they are achieving greater economies on their own, so too it is questionable to adopt a policy favoring State "all-payer" systems if States are not interested in establishing them and do not have the political support to make them effective. A binding regulatory system which proved to be ineffective, subservient to provision industry interests, and used by the industry to preclude the development of more competitive markets, could be the worst of the all possible outcomes.

Two of four States which had developed all-payer prospective payment systems have since foregone renewal of their Medicare waivers. However, several more States reportedly are in the process of implementing them. Yet, most States

have chosen not to adopt an all-payer approach. The extremely limited success of a previous Federal effort to compel State governments to regulate the health sector through certificate of need requirements and health care planning systems suggests that Federal policy preferences may have little influence on State political processes. As well, the Medicare program itself would need to be party to all-payer agreements and make use of the State-set rates; States would then need to agree, under current waiver conditions, to take on the task of Medicare budget restraints. To the extent that all-payer systems involve comparability among rates, enforcement of a Medicare payment freeze, for example, might involve freezing payment rates for the entire hospital payment system. It is at least questionable whether States will, on behalf of the Federal Government, undertake the task of enforcing the Medicare program's payment limits needed to deal with the Federal budget deficit. Such problems as retaining support of provider organizations for comprehensive rate setting arrangements is highlighted in New York State's decision to drop its request to include Medicare payments in its all-payer system, forcing the Medicare program to set its rates independently of other payers.[1] Likewise, Massachusetts did not renew its Medicare waiver request for fiscal year 1986.

Conclusion

- It would be neither feasible nor desirable for all payers for inpatient hospital to apply the Medicare PPS methodology.

- Medicare's PPS has not resulted in cost shifting that could be said to have increased health insurance costs and premiums borne by employers and employees.

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[1] Such arrangements, in which all payers use Government regulated rates but Medicare's rates are set separately, might be termed a variant of an all-payer system, but these "all-but-Medicare" systems were not considered full "all-payer" systems in this report.

APPENDICES

- 1. Actuarial note 85-01, "Exploding The Cost-shifting Myth" (8 Pages).
- 2. May 30, 1986 OIG Report - Financial Impact of the Prospective Payment System on Medicare Participating Hospitals - 1984 (31 Pages).
- 3. Uwe E. Reinhardt, Ph.D., untitled article, Health Care Financing Review, 1985 Annual Supplement (pp. 105-110).
- 4. Excerpts from Health Care Financial Measurement Association Task Force on Uncompensated Services, April 5, 1985 Exposure Draft, "Definition and Financing of Uncompensated Services" (5 selected Pages).

Exploding the Cost Shifting Myth

June, 1985

The Health Insurance Association of America (HIAA) has, for a number of years, been asserting that efforts of the Federal Government to control health care costs in the Medicare and Medicaid programs have not actually resulted in savings but have merely resulted in shifting Medicare/Medicaid costs onto the private sector. In a recent speech at a joint symposium of the American College of Hospital Administrators and the Society of Actuaries in San Francisco, James Moorefield, President of the HIAA, charged that Medicare and Medicaid were shifting over $8 billion to the private sector in 1984, and over $16 billion in 1985.

The erroneous belief, supported by the cost-shifting myth, that the Federal Government is paying less than its fair share of hospital expenses undoubtedly has affected the decisions of policymakers grappling with issues affecting Medicare and Medicaid payments to hospitals. Likewise, the cost-shifting myth undoubtedly has resulted in favorable treatment for the commercial health insurance industry (e.g., favorable tax treatment).

The HIAA methodology for estimating the cost-shift is based upon the assumption that the Medicare/Medicaid share of net hospital revenue should be proportionate to the Medicare/Medicaid share of gross hospital charges. HIAA estimates the cost-shift as the difference between what Medicare and Medicaid actually pay and what they would pay if they paid a share of net hospital revenues proportionate to their share of gross hospital charges.

Table 1 below is a summary of the HIAA cost-shift estimate for FY 1984.

Table 1

		(Billions)
A. Net Patient Revenue		$127.656
A1. Public Sector Payments	$64.696	
A2. Private Sector Payments	$62.960	
B. Gross Patient Charges		$151.134
B1. Public Sector (Medicare/Medicaid) Charges	$87.000	
B2. Private Sector Charges	$64.134	
C. Public and Private Sector Payments if Both Were Determined on the Same Basis		
1. Public: B1/B x A		$ 73.485
2. Private: B2/B x A		$ 54.171
D. Conclusion:		
Public Sector Underpayment		$ 8.789 (C1-A1)
Private Sector Overpayment		$ 8.789 (A2-C2)

The HIAA estimates Medicare and Medicaid charges from reimbursements or costs by using a cost/charge ratio. The Medicare/Medicaid cost/charge ratio is estimated from Medicare data tabulations of costs and charges by assuming that the same relationship between costs and charges that applies to Medicare also applies to Medicaid. In the HIAA estimate illustrated above, the Medicare/Medicaid cost/charge ratio is .74 for 1984 (A1/B1 = $64.696/$87.000). 1/

1/ Preliminary data under the prospective payment system indicates that the Medicare cost/charge ratios used by the HIAA are outdated. Medicare cost/charge ratios are nearing .9 for inpatient hospital payments under prospective payment. Thus, even if one were to accept the HIAA methodology for calculating the cost-shift, the magnitude of the cost-shift for 1984 and 1985 has been significantly overestimated.

HIAA did not conduct a study to determine if cost-shifting took place, but merely assumed that cost-shifting took place and then used the methodology in Table 1 to calculate the amount of the cost-shift. In point of fact, however, cost-shifting does not exist. Examination of the HIAA methodology reveals that the cost-shift estimate is based upon two key assumptions.

1. Gross patient charges are set by the hospitals to result in net revenues that do not exceed hospital expenses. In other words, cost-shifting has occurred because financial pressure has been applied to the hospitals by the public sector that forces hospitals to shift costs to the private sector.

2. Gross patient charges are a valid measure of the actual resources used in hospital patient treatment.

Both assumptions can be demonstrated to be false based on the available evidence.

Table 2 below displays the relationship between net hospital revenues and net patient revenues and hospital expenses for the period during which the HIAA has asserted that cost-shifting occurred. The data in the table were provided by the American Hospital Association (AHA). If the public sector had been exerting financial pressure on hospitals by paying less than expenses, one would expect a small or slightly negative operating margin. One would certainly not expect the operating margin to increase over the period of time during which cost-shifting was occurring. As indicated in the table, operating margin actually has increased considerably over the years. Total revenue for community hospitals has exceeded total expenses in every year since 1974, and the margin has been growing - reaching 6.6 percent in 1984. Patient revenue alone has exceeded all hospital expenses since 1980. This means

TABLE 2

TOTAL MARGIN OF COMMUNITY HOSPITALS
CALENDAR YEARS 1974-1984

Year	Total Revenue	Total Expenses	Net Total Revenue		
			Amount	Percent of Expenses	Percent of Revenue
1984	134,331,178	126,027,583	8,303,595	6.6%	6.2%
1983	126,728,291	120,219,622	6,508,669	5.4%	5.1%
1982	114,954,728	109,091,340	5,863,388	5.4%	5.1%
1981	98,812,788	94,187,000	4,625,788	4.9%	4.7%
1980	83,122,087	79,339,633	3,782,454	4.8%	4.6%
1979	70,599,829	67,832,712	2,767,117	4.1%	3.9%
1978	62,011,648	59,802,346	2,209,302	3.7%	3.6%
1977	54,992,929	53,006,115	1,986,814	3.7%	3.6%
1976	47,324,028	45,842,045	1,481,983	3.2%	3.1%
1975	39,400,855	38,492,033	908,822	2.4%	2.3%
1974	33,460,394	32,759,261	701,133	2.1%	2.1%

OPERATING MARGIN OF COMMUNITY HOSPITALS
CALENDAR YEARS 1974-1984

Year	Patient Revenue	Total Expenses	Net Operating Revenue		
			Amount	Percent of Expenses	Percent of Revenue
1984	128,547,733	126,027,583	2,520,150	2.0%	2.0%
1983	121,383,083	120,219,622	1,163,461	1.0%	1.0%
1982	109,889,658	109,091,340	798,318	0.7%	0.7%
1981	94,338,041	94,187,000	151,041	0.2%	0.2%
1980	79,543,945	79,339,633	204,312	0.3%	0.3%
1979	67,433,807	67,832,712	(398,905)	-0.6%	-0.6%
1978	59,311,319	59,802,346	(491,027)	-0.8%	-0.8%
1977	52,689,901	53,006,115	(316,214)	-0.6%	-0.6%
1976	45,166,323	45,842,045	(675,722)	-1.5%	-1.5%
1975	37,358,705	38,492,033	(1,133,328)	-2.9%	-3.0%
1974	31,586,183	32,759,261	(1,173,078)	-3.6%	-3.7%

that, since 1980, patient revenue alone has been sufficient to more than cover all expenses incurred by hospitals, including the cost of operating parking lots, flower shops, cafeterias, etc., as well as "paper" accounting expenses such as depreciation. Thus, the HIAA's first assumption above is demonstrably false. In fact, the only consistent relationship between revenue and expenses is that revenue has substantially exceeded expenses, and that the gap has been growing steadily.

The HIAA assertion that the public sector is paying less than its fair share of hospital revenues relies completely on Medicare data showing that the Medicare cost/charge ratio is substantially less than one. Illustration 1 below shows a hypothetical example of how the Medicare cost/charge ratio could be substantially less than one, yet Medicare could be paying for more than its fair share of hospital resources. The example is based upon the actual method by which Medicare costs are determined for ancillary services. It illustrates how hospitals can determine charges for ancillary services in a manner which allocates to Medicare more than its fair share of expenses in a particular cost center. Yet it appears that Medicare is paying less than its fair share of charges.

Illustration 1

Ancillary Cost Center

	Service #1	Service #2	Total
Total Services	150,000	150,000	300,000
Medicare Services	120,000	80,000	200,000
Charge Per Service	$ 15.00	$ 5.00	$ 10.00
Actual Cost Per Service	$ 8.00	$ 8.00	$ 8.00

- Medicare Reimbursable Costs:

$$\frac{120{,}000 \times \$15.00 + 80{,}000 \times \$5.00}{150{,}000 \times \$15.00 + 150{,}000 \times \$5.00} \times \$8.00 \times 300{,}000 = \$1{,}760{,}000$$

- Non-Medicare Net Revenue:

$$(150{,}000 - 120{,}000) \times \$15.00 + (150{,}000 - 80{,}000) \times \$5.00 = \$800{,}000$$

- Medicare Gross Revenue:

$$120{,}000 \times \$15.00 + 80{,}000 \times \$5.00 = \$2{,}200{,}000$$

- Medicare Cost/Charge Ratio = $\frac{\$1{,}760{,}000}{\$2{,}200{,}000} = .80$

- $\frac{\text{Non-Medicare Net Revenue}}{\text{Non-Medicare Gross Revenue}} = \frac{\$800{,}000}{\$800{,}000} = 1.00$

- $\frac{\text{Total Net Revenue}}{\text{Total Gross Revenue}} \quad \frac{\$1{,}760{,}000 + 800{,}000}{150{,}000 \times \$15.00 + 150{,}000 \times \$5.00} = .85$

- Medicare "Fair Share" Payment:

$$\frac{120{,}000 + 80{,}000}{150{,}000 + 150{,}000} \times (150{,}000 + 150{,}000) \times \$8.00 = \$1{,}600{,}000$$

The Medicare payment exceeds Medicare's fair share of costs in this ancillary cost center even though the Medicare cost/charge ratio is only .80, net revenues only amount to 85 percent of gross revenues, and the ratio of net revenues/gross revenues for non-Medicare payers is one. While Illustration 1 is hypothetical, the large variation in hospital cost/charge ratios across cost centers suggests that Illustration 1 is indicative of the manner in which hospitals determine charges. Hospitals have a strong economic incentive to set their charges in the manner illustrated above, since it allows them to maximize their Medicare reimbursement while setting their remaining charges at a level which is competitive for most other payors who pay solely on the basis of charges. Indeed, accounting firms have for years been marketing accounting services and software designed to utilize techniques similar to those illustrated in order to maximize Medicare reimbursement.

There is even evidence that hospitals use their Medicare revenues to help subsidize other payors. For example, in cost centers where there are virtually no Medicare beneficiaries, such as delivery room, costs substantially exceed charges. Illustration 1 suggests very strongly that the HIAA's second assumption is false: Gross charges are <u>not</u> a valid measure of resources used in hospital patient treatment.

The violation of the two assumptions upon which the cost-shift estimate is based shows that the HIAA notion of cost-shifting is not valid. The fact that hospital margins are significantly greater than zero, and growing, shows that cost shifting could not be taking place, because there is no financial necessity for cost-shifting. The fact that charges do not reflect resource use shows that the methodology used to derive the HIAA cost estimate (Table 1) is invalid.

During the years from 1970 to 1984, the Medicare share of hospital expenses increased by 2.3 percent per year; during the same period of time, the Medicare share of inpatient hospital days increased by only 1.8 percent annually. If cost-shifting from Medicare to the private sector were occuring, one would expect that the Medicare share of expenses would grow less rapidly than the Medicare share of days. Thus, as with Illustration 1, the evidence does not suggest the possibility of cost-shifting from Medicare to the private sector.

Prospective payment eliminates the powerful incentive for hospitals to set their charges for inpatient services to maximize Medicare reimbursement. Also, the equitable setting of charges enhances accurate cost-accounting, which is a necessity under prospective payment. Thus, it is entirely possible that, with the new incentives of prospective payment, the national average Medicare cost/charge ratio could eventually exceed one. It already exceeds one in many hospitals and areas of the country. Is it possible then that the HIAA will estimate that the private sector is shifting costs to the public sector?

FINANCIAL IMPACT OF THE PROSPECTIVE PAYMENT SYSTEM ON MEDICARE PARTICIPATING HOSPITALS - 1984

OFFICE OF INSPECTOR GENERAL

OFFICE OF AUDIT

Audit Control No. 09-62021

DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of Inspector General

CNO#8606021332

Memorandum

Date: MAY 30 1986

From: Richard P. Kusserow
Inspector General

OEO:ACTION
cc:WRoper, HDesmarais, AAPD
AAO, AAM, AAEA, Spiegel
FJones, ORM, BERC
DUE:7/25 NOR:Adm. Sig.

Subject: OIG Report - Financial Impact of the Prospective Payment System on Medicare Participating Hospitals - 1984
ACN: 09-62021

To: William L. Roper, M.D.
Administrator
Health Care Financing Administration

In 1983 Congress enacted P.L. 98-21 which included a Medicare Prospective Payment System (PPS), effective October 1, 1983. Under PPS, acute care hospitals are paid according to individual patient diagnoses as categorized into 468 Diagnosis Related Groups. Prospective payment rates for the first 4 years are based on a blend of a hospital specific rate per discharge and a Federal rate. After the 4 year transitional period the payments are to be based on a 100 percent Federal rate. 1/ PPS rates reimburse for inpatient operating costs except for specifically excluded items such as capital, direct medical education and bad debts. PPS created financial incentives to reduce the rate of increase in escalating Medicare expenditures.

Since the inception of PPS, there have been concerns over its financial impact on hospital operations. Some hospitals have complained of financial losses under PPS while others have reported record setting profit margins. The OIG initiated a study to determine the financial impact of PPS on hospitals in 1984. In our study, we analyzed 2,099 Medicare cost reports submitted by hospitals in 18 States. These cost reports represent 39 percent of the 5,405 total hospitals participating in PPS in 1984.

HIGHLIGHTS OF STUDY RESULTS

Our study indicates that the 2,099 hospitals earned Medicare profits of almost $2.2 billion, (Exhibit A), resulting in a net profit margin of about 15 percent on Medicare revenues and in a return on investment (equity) of 25 percent. If the results of the sample are representative, participating hospitals may have earned a net $5.5 billion (Exhibit B) in Medicare profits in their first year of PPS.

HCFA/EXEC.SEC.
'86 JUN 2 PM 12:36

1/ Medicare Program; Fiscal Year 1986 Changes to the Inpatient Hospital Prospective Payment System; Interim Final Rule, Federal Register, Tuesday, May 6, 1986, DHHS, HCFA, 42 CFR Parts 400, 405, 412, and 489.

Other highlights of our study results are that:

- 82 percent of the 2,099 facilities earned profits averaging $1.3 million per facility.
- 18 percent of the sampled hospitals incurred losses averaging $155,000 per facility.
- Average profits were eight times the size of average losses.
- 204 of the hospitals (9.7 percent of those reviewed) realized the largest profits, averaging $5.9 million per facility, with the largest profit being $24 million from $88 million of Medicare revenue.
- 97 percent of teaching institutions made profits compared to 79 percent of non-teaching facilities.
- Teaching hospitals had a 47 percent higher profit margin (18.28 percent) than that of non-teaching facilities (12.42 percent). The teaching hospital margin included the additional Medicare payments for indirect medical education. But, even without these added payments, the teaching hospital margin (15.08 percent) would have been 21 percent larger than the non-teaching margin.
- Investor-owned hospitals had a 21 percent higher profit margin (17.89 percent) than non-profit institutions (14.75 percent). The investor-owned margin was greater because of the Medicare payments for return on equity capital. Without these extra payments, the investor-owned margin would still have been high--13.24 percent.
- 91 percent of urban hospitals profited compared to 71 percent of rural hospitals. The urban profit margin was 16.08 percent while the rural margin was 9.22 percent.
- Facilities with more certified beds tended to have higher profit margins.

These Medicare profits resulted, in part, because established PPS rates were based on overstated hospital inpatient operating costs. Our studies of operating costs used to establish the PPS standardized rates have reported that:

- PPS rates improperly include capital costs for ancillary and special care services that should have been excluded from total operating costs.
- All capital costs not specifically identified on the cost reports were included in the PPS rates.

- Nursing school and paraprofessional medical education costs for ancillary and intensive care services were not properly excluded from total operating costs.

- The costs of exempt hospital units (rehabilitation, psychiatric and alcoholic), now reimbursed separately on a cost basis under PPS, were also included in the base period costs used to develop the Federal rates.

The GAO has also reported in various audit reports that PPS rates are overstated because they were based on unaudited costs which included unallowable amounts as well as costs of unnecessary hospital ancillary services; inappropriate costs for respiratory therapy services; erroneous, obsolete cost data on the use of cardiac pacemakers; and, the higher cost of avoidable intensive care services.

Since the implementation of PPS, HCFA regulations have changed the methods, amounts and factors used to determine PPS rates. The Department, recognizing that the PPS payments were overstated, issued regulations to freeze (implement a zero update factor) the 1986 PPS rates at the 1985 payment levels. This was a positive step. This action, however, did not correct for the deficiencies in the base used to develop the standardized amounts.

We have previously recommended that HCFA rebase the PPS rates using audited cost data to correct for deficiencies in the present data and to reflect recent hospital behavior under PPS incentives. The Office of the General Counsel has indicated, however, that rebasing the PPS rates may not be possible without legislative authority. Therefore, we are now recommending that HCFA:

- Clarify the legal basis to rebase. If a legislative change is required, HCFA should seek Congressional authority to recompute the DRG rates using more accurate, audited cost information.

- Rebase the DRG rates after the full transition has been made to a 100 percent Federal rate. This will allow for the DRG rates to be developed utilizing to the fullest extent hospital behavior under PPS.

BACKGROUND

The Congress enacted a Medicare Prospective Payment System for inpatient hospital services effective for hospital cost reporting periods beginning on or after October 1, 1983. The system was developed as a means of controlling the growth in Medicare expenditures. Medicare inpatient costs escalated

from $4.6 billion in 1970 to $38.5 billion in 1983, more than a eight fold increase. Placing hospitals under a prospective payment system gives hospitals an incentive to control costs because they can profit or lose depending on whether their costs are below or above the prospective payment rates.

Medicare payments based on fixed predetermined rates represent the average nationwide cost of treating a patient for a particular illness. During a 4 year transition, hospital payments are based on a blending of the Federal rate with a rate based on hospitals' historical reasonable costs. By FY 1988, Medicare's payments are to be based on 100 percent Federal rates for hospitals.

In addition to the payment rate for each allowable discharge, teaching hospitals can receive additional inpatient payments for indirect medical education and proprietary hospitals can receive a payment for return on equity. Also, certain hospital inpatient costs, such as capital, direct medical education and bad debts, are excluded from the prospective payment system and continue to be paid on a reasonable cost basis.

SCOPE OF STUDY

The objective of the study was to determine the financial impact of PPS on hospitals by analyzing the extent of profits and losses made by hospitals in their first year of PPS. The field work was conducted at Medicare fiscal intermediaries in 18 States across the country. The 18 States included: Alaska, California, Colorado, Connecticut, Florida, Georgia, Illinois, Kansas, Michigan, Minnesota, Missouri, North Carolina, Ohio, Oregon, Pennsylvania, Texas, Washington, and Wisconsin.

All complete first year Medicare cost reports that were on hand at the fiscal intermediaries were surveyed. The data used in our study were taken from unaudited cost reports which were certified by hospital representatives as being true, correct and complete.

Two widely recognized measures of profitability were considered in our study. The first was the profit margin on Medicare inpatient revenues: the ratio of Medicare profits to Medicare revenues. We defined Medicare profit as the difference between a hospital's reported Medicare inpatient revenue and Medicare inpatient costs. In determining Medicare inpatient revenue, we included return on equity, DRG revenue, outliers, and indirect medical education (IME) payments. In developing Medicare inpatient operating costs, Medicare pass through amounts such as capital, direct medical education and bad debts were not included since these items are reimbursed independently of the PPS mechanism.

The second measure of profitability we used was return on equity: the ratio of the profit earned by hospitals to net worth (assets minus liabilities). We computed a return on equity for both profit and non-profit hospitals as it related to Medicare inpatient services. This was done by allocating a portion of the equity to Medicare inpatient services on the basis of revenue.

There were 2,494 hospital cost reports on hand at 18 fiscal intermediaries at the time of our visits, representing 46 percent of hospitals participating in PPS. Included in the 2,494 reports were 354 reports that were not complete or contained errors which precluded us from using them in the study. Another 41 reports which covered 6 or less months of PPS results were excluded from the study because of the short PPS period covered. In total 2,099 complete, unaudited cost reports representing 39 percent of all participating hospitals were analyzed.

We made no attempt to determine profit or loss for non-Medicare hospital business or for the hospitals' total business operations.

RESULTS OF STUDY

The cost reports we reviewed indicate that hospitals realized a net average profit of about 15 percent. The hospitals in our study earned a net profit of almost $2.2 billion for their first year under PPS. Based on these results, we estimate that profits for all hospitals under PPS could amount to $5.5 billion. This estimated profit may even be understated because it was based on hospital costs which were not audited. Hospitals have historically overstated allowable costs on cost reports submitted to Medicare. For example, the Medicare fiscal intermediary in Southern California advised us that hospitals there had overstated their allowable costs in the past by about 11 percent. The GAO has reported that the overstatement of costs generally averages about 3 percent. 2/

As part of our profit study, we arrayed the profit data into a number of subgroups including the hospitals' teaching status, geographical location and type of ownership. Each subgrouping will be discussed in the following paragraphs.

2/ Use of Unaudited Hospital Cost Data Resulted in Overstatement of Medicare's Prospective Payment System Rates (GAO/HRD-85-74, July 18, 1985)

Comparison of Winning and Losing Hospitals

Of the 2,099 hospitals surveyed, 1,712 (82 percent) posted a profit, and 387 (18 percent) a loss. The winning hospitals had profits totaling $2.2 billion, an average of $1.3 million per facility. The losses of the 387 hospitals, on the other hand, were much smaller, totaling $60 million or $155,000 per facility.

There were clear differences between winning and losing hospitals. Profit makers had four times more Medicare revenue (an average of $8 million) than losing facilities (an average of $2 million). The profit makers were also found to be much larger institutions. They averaged 192 certified beds compared to only 83 for losing hospitals.

Almost all teaching facilities (97 percent) profited compared to 79 percent for non-teaching hospitals. Similarly, most investor-owned (87 percent) and non-profit (81 percent) hospitals posted profits. Most of the urban hospitals (91 percent) profited compared to 71 percent for rural facilities.

A comparison of winning and losing hospitals is summarized in Exhibit C.

High Profit Hospitals

The 204 hospitals (9.7 percent) with the highest profits earned $1.2 billion, or 54 percent, of the hospital profits. Their profits averaged $5.9 million per facility, almost nine times the average of the other 1,508 profitable hospitals.

Three of the 204 hospitals accounted for $68 million of profits. All three were tax exempt, teaching facilities.

- One of the facilities located in Ohio earned $24 million on $88 million of Medicare revenue. Its profit margin and return on equity were 27 percent and 25 percent, respectively.

- Another teaching hospital in California earned $22 million of profits on $52 million of Medicare business. The profit margin for this hospital was 42 percent, while its return on equity came to 104 percent.

- The third was a Texas hospital that earned $22 million on $55 million of Medicare revenue. Its profit margin and return on equity were 40 percent and 38 percent, respectively.

The large profits of the 204 facilities helped increase the weighted profit margin of the winning hospitals. However, even without the top 204 hospitals, the weighted profit margin of the other 1,508 winning hospitals would still have been high--12.72 percent.

The profit range of the 1,712 winners is shown in Exhibit D, with profiles of the top 204 winners and the other 1,508 summarized in Exhibits E and F, respectively.

Highest Loss Hospitals

Just as a relatively small number of hospitals accounted for the largest profits, 58 hospitals (2.8 percent) had a disproportionate share of the losses. The top loss hospitals accounted for 54 percent of the total losses. They had an average loss of $562,000, almost seven times the average loss of $84,000 for the other 329 losing facilities.

Two of the 58 facilities had $4.4 million of losses between them. Both were non-profit and non-teaching facilities.

- The first facility located in rural Georgia lost $2.6 million on $6.5 million of Medicare revenue. Its loss margin and loss on equity were 40 percent and 53 percent, respectively.

- The second was an urban hospital in Pennsylvania that lost $1.8 million on $10.7 million of Medicare revenue. The loss margin for this hospital was 17 percent and the loss on equity 32 percent.

The top loss hospitals had more Medicare business and were bigger institutions than the other losing facilities. They averaged $5.1 million in Medicare revenue compared to $1.5 million for the other losing facilities, and had an average of 177 beds compared to 66 for the other 329. The top losers were generally urban facilities (66 percent) in contrast to the others which were only 19 percent urban.

The range of losses for the 387 losers is shown in Exhibit G, with profiles of the top 58 losers and the other 329 summarized in Exhibits H and I, respectively.

Teaching and Non-Teaching

Almost all (97 percent) of the 327 teaching hospitals in the sample earned a profit compared to 79 percent of the 1,772 non-teaching facilities. Not only did more teaching Hospitals profit, they earned a considerably higher profit margin and return on equity than non-teaching facilities. The profit margin of teaching facilities was 47 percent higher than that of non-teaching hospitals (18.28 percent vs. 12.42 percent). Similarly, the return on equity of teaching hospitals was 32 percent higher than that of non-teaching hospitals (28.60 percent vs. 21.65 percent).

One reason the teaching profit margin was so much higher was that it included $240 million of additional Medicare payments given to the 327 hospitals for indirect medical education.

If Medicare had made no IME payments, the profit margin for the 327 teaching hospitals would still have been 21 percent higher than that of non-teaching hospitals (15.08 percent vs. 12.42 percent) and the return on equity would have been 8 percent higher (23.34 percent vs. 21.65 percent). These large profits raise questions whether the additional IME payments to teaching hospitals were necessary during the first year of PPS.

A separate OIG audit, issued on May 15, 1986, recommends reductions in the IME payments to teaching hospitals. 3/

A comparison of teaching and non-teaching hospitals is shown in Exhibit J, with profiles of the winning teaching and non-teaching facilities summarized in Exhibits K and L, respectively.

Investor-Owned and Non-Profit

We reviewed 214 investor-owned and 1,885 non-profit hospitals. Eighty-seven percent of the investor-owned earned profits compared to 81 percent for the non-profit.

The investor-owned hospitals had a net average profit of $881,000, which was less than the average of $1.1 million for non-profits. But, the investor-owned profit margin (17.89 percent) was 21 percent higher than that of non-profit institutions (14.75 percent). And their return on equity of 44.71 percent was 87 percent higher than that of non-profits (23.87 percent).

A major factor for the investor-owned margin being higher than that of non-profits was the added Medicare payments of return on equity capital. The 214 facilities in the sample received $56.5 million of such payments. If return on equity payments were eliminated, the investor-owned hospitals would have had a 13.24 percent profit margin.

In our previous study dated July 9, 1984, we recommended the elimination of return on equity capital since proprietary hospitals could earn higher profits under PPS than non-profit

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3/ Medicare Indirect Medical Education Payments to Teaching Hospitals (DHHS-OIG-OA, ACN: 09-62003)

hospitals. 4/ This study showed for proprietary hospitals an average operating cost lower than the average of all hospitals. We also recommended in testimony before Congress that return of equity capital be excluded from any policy to incorporate capital under the prospective payment system. 5/ Subsequently the Congress enacted legislation to phase-out return on equity payments over a 3 year period starting October 1, 1986. 6/

A comparison of investor-owned and non-profit hospitals is shown in Exhibit M, with profiles of winning investor-owned and non-profit facilities summarized in Exhibits N and O, respectively.

Urban and Rural

Urban hospitals earned far greater profits than rural facilities, though most rurals did earn a profit. About 91 percent of the 1,099 urbans in the sample profited compared to 71 percent of the 1,000 rurals. The difference in net profits between urbans and rurals was great.

- The average profit was $1.8 million for urbans, $217,000 for rurals.
- The profit margin was 16.08 percent for urbans, 9.22 percent for rurals.
- The return on equity was 26.90 percent for urbans, 14.76 percent for rurals.

A comparison of urban and rural hospitals is shown in Exhibit P, with profiles of winning urban and rural facilities summarized in Exhibits Q and R, respectively.

4/ Areas for Consideration in Developing Recommendations for Reimbursing Hospital Capital Costs under the Medicare Prospective Payment System (Priority Audit Memorandum issued on July 9, 1984; ACN: 07-42019.)

5/ Statement by Richard P. Kusserow, Inspector General, Department of Health and Human Services before the Subcommittee on Health, Committee on Ways and Means, House of Representatives on the Payment of Return on Equity Capital to Proprietary Providers by the Medicare Program, May 14, 1985.

6/ Consolidated Omnibus Budget Reconciliation Act of 1985, formerly H.R. 3128.

Number of Beds

We noted that a direct correlation exists between the profit a hospital made under PPS and its number of certified beds. As previously noted, a winning hospital on average had more than twice as many beds (192) as a losing facility (83), and the more beds a hospital had the greater its profit margin. This correlation is illustrated in the schedule below.

Number of Certified Beds	Net Weighted Profit Margin
400 +	17.47%
250 - 399	14.82%
100 - 249	12.91%
50 - 99	11.38%
Under 50	7.39%

Causes of Profits

We believe these Medicare profits occurred, in part, because the PPS Federal rate was based on overstated hospital inpatient operating costs. Although we did not examine hospital rates as part of our profit analysis, our prior audits reviewed the hospital cost data used to develop the prospective payment rates. These audits, summarized below, determined that the 1981 hospital inpatient operating costs used to establish the PPS rates were overstated. Our audits reported that:

- HCFA procedures for excluding capital costs from hospitals' total operating costs were not adequate to exclude all capital costs attributable to and comingled with other costs of ancillary and special care services. For FY 1986, Medicare will pay an additional $400 million for these capital costs in the Federal rates.

- The intermediary audits of hospitals' 1982 or 1983 Medicare cost reports, used to set the hospital specific portion of the 1984 DRG rates, identified about $966 million of "new" capital expenses which had not been identified as capital costs and excluded from the cost base used to develop the Federal PPS rate. The FY 1986 overstatement is estimated at $320 million.

- HCFA procedures for excluding medical education costs in developing the Federal PPS rates did not properly exclude nursing school costs for ancillary services and intensive care as well as costs for paraprofessional medical education. FY 1986 additional Medicare payments for these items will amount to about $70 million.

- The costs of exempt hospital units (rehabilitation, psychiatric and alcoholic) which are now reimbursed separately on a cost basis under PPS were also included in the base period costs used to develop the Federal rates.

The General Accounting Office has also performed studies which concluded the data used to set prospective payment rates included the cost of unnecessary services and/or inappropriate costs elements. The GAO reports noted the PPS rates include:

- the costs of unnecessary hospital ancillary services;
- unallowable costs and inappropriate costs for respiratory therapy services;
- erroneous and obsolete cost data on the use of cardiac pacemakers;
- capital costs that also were reimbursed separately; and
- the higher cost of avoidable intensive care services.

Conclusions and Recommendations

All of the issues above indicate that the base cost data used to set the PPS rates was inflated resulting in increased DRG payments. These overpayments have contributed to the large profits disclosed from our current study. Since the implementation of PPS, HCFA regulations have changed the methods, amounts and factors used to determine PPS rates. The Department, recognizing that the PPS payments, were overstated, issued regulations to freeze (implement a zero update factor) the PPS rates at the 1985 payment levels. Although this was a positive step, this action did not correct for the deficiencies in the base used to develop the standardized amounts.

We have previously recommended that HCFA rebase the PPS rates using audited cost data to correct for deficiencies in the present data and to reflect recent hospital behavior under PPS incentives. The Office of the General Counsel has indicated, however, that rebasing the PPS rates may not be possible without legislative authority.

We, therefore, now recommend that HCFA:

- Clarify the legal basis to rebase. If a legislative change is required, HCFA should seek Congressional authority to recompute the DRG rates using more accurate, audited cost information.
- Rebase the DRG rates after the full transition has been made to a 100 percent Federal rate. This will allow for the DRG rates to be developed utilizing to the fullest extent hospital behavior under the PPS.

We will continue to look at the financial impact PPS has had on hospital operations. Our reviews will include further analysis utilizing data accumulated on hospital profits and data presently being accumulated through our longitudinal data base of 240 sample hospitals. We will concentrate on those hospitals which meet the criteria of serving a disproportionate share of low income patients as well as teaching and rural hospitals.

If you or your staff wish to discuss these matters further, please let me know or contact Felix J. Majka, Assistant Inspector General for Audit. We would appreciate a status report, within 60 days, of any action taken or planned on our recommendations. Copies of this report are being provided to other Departmental officials.

Attachments

EXHIBIT A

OVERALL RESULTS BY STATE

State	Number of Hospitals Analyzed	Net Profits		Weighted	
		Total	Average Per Hospital	Profit Margin	Return on Equity
Alaska	5	$ 196,838	$ 39,368	1.65%	1.97%
California	214	316,382,169	1,478,421	15.61	27.79
Colorado	66	58,005,815	878,876	16.72	26.62
Connecticut	27	57,216,092	2,119,115	14.94	22.10
Florida	128	165,279,056	1,291,243	11.80	24.17
Georgia	117	45,278,088	386,992	10.10	15.69
Illinois	125	130,277,502	1,042,220	12.82	19.86
Kansas	119	31,973,255	268,683	11.42	16.74
Michigan	159	173,572,076	1,091,648	13.26	23.32
Minnesota	131	53,032,854	404,831	13.65	24.55
Missouri	119	185,017,633	1,554,770	20.27	31.88
North Carolina	111	96,859,601	872,609	14.81	20.05
Ohio	162	242,928,878	1,499,561	14.47	22.67
Oregon	34	43,129,990	1,268,529	18.64	30.95
Pennsylvania	110	233,861,357	2,126,012	17.76	32.10
Texas	268	202,950,649	757,279	17.92	26.13
Washington	83	54,145,205	652,352	13.69	21.88
Wisconsin	121	93,030,688	768,849	14.43	26.88
Total	2,099	$2,183,137,746			
			$1,040,085	14.97%	24.87%

NOTE: Above data, as well as data on all other exhibits in this report, were obtained from unaudited cost reports submitted by hospitals.

EXHIBIT C

WINNERS VS. LOSERS

	Winning Hospitals	Losing Hospitals
Number	1,712	387
Percent	82%	18%
Total Profits/<Losses>	$2,243,284,412	<$60,146,666>
Average Profit/<Loss>	$1,310,330	<$155,418>
Weighted Profit/<Loss>Margin	16.26%	<7.73%>
Average Medicare Revenue	$8,061,000	$2,011,246
Average Number of Certified Beds	192	83
Number of Teaching	317	10
Percent	97%	3%
Number of Non-Teaching	1,395	377
Percent	79%	21%
Number of Investor-Owned	187	27
Percent	87%	13%
Number of Non-Profit	1,525	360
Percent	81%	19%
Number of Urban	997	102
Percent	91%	9%
Number of Rural	715	285
Percent	71%	29%

EXHIBIT B

PROJECTION OF PPS PROFITS

Number of Hospitals Analyzed	2,099
Net Profits of Hospitals Analyzed	$2,183,137,746
(Including Return on Equity Capital Payments of $56,534,605)	
Average Net Hospital Profit	$1,040,085
Number of PPS Hospitals at 9/30/84	5,405
Less: Estimated Hospitals with Short Reporting Periods	[89]
Adjusted Number of PPS Hospitals	5,316
	(Note 1)
Total Projected Net Profits ($1,040,085 x 5,316)	$5.529 billion
	(Note 2)
(Including Estimated Return on Equity Capital Payments of $143 million)	

Note 1. The 2,494 cost reports available for our review included 41 (1.64 percent) that had short periods of PPS results and were excluded from the analysis. We have reduced the universe of 5,405 PPS hospitals by 1.64 percent to reflect the estimated number of hospitals (89) with short periods of PPS results.

Note 2. By excluding profits earned by the estimated 89 short period hospitals (see Note 1), our estimate of the net profit of $5.529 billion earned by hospitals in their first year of PPS is most likely understated. Also, the $5.529 billion projection is based on unaudited hospital reported costs which if overstated, as has been the case in the past, would result in the $5.529 billion profit projection being understated.

EXHIBIT E

PROFILE OF TOP 204 WINNERS

Number of Hospitals Earning Over $3.0 million	204
Total Profits	$1,205,414,164
Range of Profits	$3,001,554 to $24,290,718
Average Hospital Profit	$5,908,893
Weighted Profit Margin	21.37%
Weighted Return on Equity	32.70%
Average Medicare Revenue	$27,649,484
Average Number of Certified Beds	511

	Number	Percent
Teaching Status		
Teaching	135	66%
Non-Teaching	69	34
Total	204	100%
Tax Status		
Investor-Owned	11	5%
Non-Profit	193	95
Total	204	100%
Urban vs. Rural		
Urban	201	99%
Rural	3	1
Total	204	100%
Beds		
400 +	136	67%
250 to 399	54	27
100 to 249	13	6
99 or Under	1	-
Total	204	100%

EXHIBIT D

DISTRIBUTION OF PROFITS

Range of Profits	Number of Hospitals	Total Profits	Average Profit Per Hospital	Weighted Profit Margin
$1 to $499,999	837	$ 155,532,852	$ 185,822	8.36%
$500,000 to $999,999	282	201,648,414	715,065	11.40
$1.0 mil to $1.499 mil	164	197,275,546	1,202,900	13.21
$1.5 mil to $1.999 mil	102	179,250,638	1,757,359	14.61
$2.0 mil to $2.999 mil	123	304,162,798	2,472,868	16.81
Subtotal ($1 to $2.999 mil)	1,508	$1,037,870,248		
			$ 688,243	12.72%
$3.0 mil to $3.999 mil	69	$ 238,020,503	$ 3,449,573	18.33%
$4.0 mil to $5.999 mil	71	346,562,765	$ 4,881,166	18.71
$6.0 mil to $9.999 mil	45	334,685,217	7,437,449	22.37
$10.0 mil to $14.999 mil	10	113,028,890	11,302,889	29.04
$15.0 mil to $19.999 mil	6	104,561,136	17,426,856	25.58
$20.0 mil to $24.999 mil	3	68,555,653	22,851,884	35.10
Subtotal ($3.0 mil to $24.999 mil)	204	$1,205,414,164		
			$ 5,908,893	21.37%
Grand Total	1,712	$2,243,284,412		
			$ 1,310,330	16.26%

EXHIBIT G

DISTRIBUTION OF LOSSES

Range of Losses	Number of Hospitals	Total Losses	Average Loss Per Hospital	Weighted Loss Margin
$1 to $49,999	134	$3,154,141	$23,538	1.98%
$50,000 to $99,999	77	5,612,086	72,884	4.55
$100,000 to $149,999	57	7,049,754	123,680	9.66
$150,000 to $199,999	40	7,021,304	175,533	8.94
$200,000 to $249,999	21	4,716,061	224,574	9.57
Subtotal ($1 to 249,999)	329	$27,553,346	$83,749	5.70%
$250,000 to $349,999	18	$5,398,708	$299,928	9.81%
$350,000 to $499,999	15	6,127,459	408,497	10.60
$500,000 to $749,999	15	9,107,137	607,142	10.65
$750,000 to $1.499 mil	8	7,590,247	948,781	9.53
$1.5 mil to $2.599 mil	2	4,369,769	2,184,885	25.54
Subtotal ($250,000 to $2.599 mil)	58	$32,593,320	$561,954	11.04%
Grand Total	387	$60,146,666	$155,418	7.73%

EXHIBIT F

PROFILE OF OTHER 1,508 WINNERS

Number of Hospitals Earning Less Than $3.0 Million	1,508
Total Profits	$1,037,870,248
Range of Profits	$9 to $2,985,578
Average Hospital Profit	$688,243
Weighted Profit Margin	12.72%
Weighted Return on Equity	22.48%
Average Medicare Revenue	$5,411,099
Average Number of Certified Beds	149

	Number	Percent
Teaching Status		
Teaching	182	12%
Non-Teaching	1,326	88
Total	1,508	100%
Tax Status		
Investor-Owned	176	12%
Non-Profit	1,332	88
Total	1,508	100%
Urban vs. Rural		
Urban	796	53%
Rural	712	47
Total	1,508	100%
Beds		
400 +	86	6%
250 to 399	185	12
100 to 249	495	33
50 to 99	391	26
Under 50	351	23
Total	1,508	100%

EXHIBIT I

PROFILE OF OTHER 329 LOSERS

Number of Hospitals Losing Less Than $250,000	329
Total Losses	$27,553,346
Range of Losses	$587 to $247,053
Average Hospital Loss	$83,749
Weighted Loss Margin	5.70%
Weighted Loss on Equity	9.06%
Average Medicare Revenue	$1,468,722
Average Number of Certified Beds	66

	Number	Percent
Teaching Status		
Teaching	4	1%
Non-Teaching	325	99
Total	329	100%
Tax Status		
Investor-Owned	25	8%
Non-Profit	304	92
Total	329	100%
Urban vs. Rural		
Urban	64	19%
Rural	265	81
Total	329	100%
Beds		
400+	1	-
250 to 399	8	2%
100 to 249	51	16
50 to 99	78	24
Under 50	191	58
Total	329	100%

EXHIBIT H

PROFILE OF TOP 58 LOSERS

Number of Hospitals Losing Over $250,000	58
Total Losses	$32,593,320
Range of Losses	$257,945 to $2,589,399
Average Hospital Loss	$561,954
Weighted Loss Margin	11.04%
Weighted Loss on Equity	18.97%
Average Medicare Revenue	$5,088,665
Average Number of Certified Beds	177

	Number	Percent
Teaching Status		
Teaching	6	10%
Non-Teaching	52	90
Total	58	100%
Tax Status		
Investor-Owned	2	3%
Non-Profit	56	97
Total	58	100%
Urban vs. Rural		
Urban	38	66%
Rural	20	34
Total	58	100%
Beds		
400 +	6	10%
250 to 399	8	14
100 to 249	22	38
50 to 99	16	28
Under 50	6	10
Total	58	100%

EXHIBIT K

PROFILE OF WINNING TEACHING HOSPITALS

Description	Hospitals Number	Hospitals Percent	Total Profits	Average Profit Per Hospital	Weighted Profit Margin
Tax Status					
Investor-Owned	2	1%	$ 3,946,519	$1,973,260	24.40%
Non-Profit	315	99	1,163,285,727	3,692,971	18.58
Total	317	100%	$1,167,232,246		
				$3,682,121	18.59%
Urban vs. Rural					
Urban	303	96%	$1,134,834,675	$3,745,329	18.57%
Rural	14	4	32,397,571	2,314,112	19.45
Total	317	100%	$1,167,232,246		
				$3,682,121	18.59%
Beds					
400+	159	50%	$ 856,639,977	$5,387,673	18.94%
250 to 399	86	27	224,045,472	2,605,180	17.74
100 to 249	59	19	79,029,049	1,339,475	18.20
50 to 99	11	3	7,390,112	671,828	13.23
Under 50	2	1	127,636	63,818	14.65
Total	317	100%	$1,167,232,246		
				$3,682,121	18.59%

Average Number of Certified Beds	424
Average Medicare Revenue	$19,804,010

EXHIBIT J

TEACHING VS. NON-TEACHING

	Teaching		Non-Teaching	
	Number	Percent	Number	Percent
Winning Facilities	317	97%	1,395	79%
Losing Facilities	10	3	377	21
Total	327	100%	1,772	100%

	Teaching		
	Before IME Payments	After IME Payments	Non-Teaching
Total Net Profits	$922,727,474	$1,162,784,809	$1,020,352,937
		(Note 1)	
Average Net Hospital Profit	$2,821,797	$3,555,917	$575,820
Net Weighted Profit Margin	15.08%	18.28%	12.42%
Net Weighted Return on Equity	23.34%	28.60%	21.65%

Note 1. The 327 teaching hospitals received an extra $240,057,335 of Medicare payments for indirect medical education.

EXHIBIT M

INVESTOR-OWNED VS. NON-PROFIT

	Investor-Owned		Non-Profit	
	Number	Percent	Number	Percent
Winning Facilities	187	87%	1,525	81%
Losing Facilities	27	13	360	19
Total	214	100%	1,885	100%

	Investor-Owned		Non-Profit
	Before ROE Payments	After ROE Payments	
Total Net Profits	$131,935,379	$188,469,984 (Note 1)	$1,994,667,762
Average Net Hospital Profit	$616,520	$880,701	$1,058,179
Net Weighted Profit Margin	13.24%	17.89%	14.75%
Net Weighted Return on Equity	33.03%	44.71%	23.87%

Note 1. The 214 investor-owned hospitals received an extra $56,534,605 of return on equity capital payments which were not given to non-profit institutions.

EXHIBIT L

PROFILE OF WINNING NON-TEACHING HOSPITALS

Description	Hospitals Number	Hospitals Percent	Total Profits	Average Profit Per Hospital	Weighted Profit Margin
Tax Status					
Investor-Owned	185	13%	$187,243,767	$1,012,128	18.49%
Non-Profit	1,210	87	888,808,399	734,552	13.65
Total	1,395	100%	$1,076,052,166		
				$771,364	14.30%
Urban vs. Rural					
Urban	694	50%	$858,921,898	$1,237,640	15.04%
Rural	701	50	217,130,268	309,744	11.99
Total	1,395	100%	$1,076,052,166		
				$771,364	14.30%
Beds					
400+	63	5%	$203,401,840	$3,228,601	14.44%
250 to 399	153	11	296,753,295	1,939,564	14.33
100 to 249	449	32	394,323,585	878,226	14.10
50 to 99	381	27	134,208,261	352,253	14.57
Under 50	349	25	47,365,185	135,717	14.60
Total	1,395	100%	$1,076,052,166		
				$771,364	14.30%

Average Number of Certified Beds 139

Average Medicare Revenue $5,392,517

EXHIBIT O

PROFILE OF WINNING NON-PROFIT HOSPITALS

Description	Hospitals Number	Hospitals Percent	Total Profits	Average Profit Per Hospital	Weighted Profit Margin
Teaching Status					
Teaching	315	21%	$1,163,285,727	$3,692,971	18.58%
Non-Teaching	1,210	79	888,808,399	734,552	13.65
Total	1,525	100%	$2,052,094,126		
				$1,345,635	16.07%
Urban vs. Rural					
Urban	855	56%	$1,825,705,616	$2,135,328	16.71%
Rural	670	44	226,388,510	337,893	12.25
Total	1,525	100%	$2,052,094,126		
				$1,345,635	16.07%
Beds					
400+	218	14%	$1,046,074,858	$4,798,509	17.95%
250 to 399	225	15	487,654,997	2,167,356	15.58
100 to 249	435	28	373,886,423	859,509	13.67
50 to 99	333	22	107,136,483	321,731	13.45
Under 50	314	21	37,341,365	118,922	13.25
Total	1,525	100%	$2,052,094,126		
				$1,345,635	16.07%

Average Number of Certified Beds 200

Average Medicare Revenue $8,374,833

EXHIBIT N

PROFILE OF WINNING INVESTOR-OWNED HOSPITALS

Description	Hospitals Number	Hospitals Percent	Total Profits	Average Profit Per Hospital	Weighted Profit Margin
Teaching Status					
Teaching	2	1%	$ 3,946,519	$1,973,260	24.40%
Non-Teaching	185	99	187,243,767	1,012,128	18.49
Total	187	100%	$191,190,286		
				$1,022,408	18.58%
Urban vs. Rural					
Urban	142	76%	$168,050,957	$1,183,457	18.69%
Rural	45	24	23,139,329	514,207	17.87
Total	187	100%	$191,190,286		
				$1,022,408	18.58%
Beds					
400+	4	2%	$ 13,966,959	$3,491,740	13.48%
250 to 399	14	7	33,143,770	2,367,412	16.20
100 to 249	73	39	99,466,211	1,362,551	20.04
50 to 99	59	32	34,461,890	584,100	19.07
Under 50	37	20	10,151,456	274,364	23.34
Total	187	100%	$191,190,286		
				$1,022,408	18.58%

Average Number of Certified Beds	127
Average Medicare Revenue	$5,501,667

EXHIBIT Q

PROFILE OF WINNING URBAN HOSPITALS

Description	Hospitals Number	Hospitals Percent	Total Profits	Average Profit Per Hospital	Weighted Profit Margin
Teaching Status					
Teaching	303	30%	$1,134,834,675	$3,745,329	18.57%
Non-Teaching	694	70	858,921,898	1,237,640	15.04
Total	997	100%	$1,993,756,573		
				$1,999,756	16.86%
Tax Status					
Investor-Owned	142	14%	$ 168,050,957	$1,183,457	18.69%
Non-Profit	855	86	1,825,705,616	2,135,328	16.71
Total	997	100%	$1,993,756,573		
				$1,999,756	16.86%
Beds					
400+	218	22%	$1,040,811,533	$4,774,365	17.80%
250-399	210	21	486,806,134	2,318,124	16.10
100-249	337	34	369,572,575	1,096,655	15.55
50-99	154	15	79,335,684	515,167	16.78
Under 50	78	8	17,230,647	220,906	16.76
Total	997	100%	$1,993,756,573		
				$1,999,756	16.86%

Average Number of Certified Beds	266
Average Medicare Revenue	$11,858,693

EXHIBIT P

URBAN VS. RURAL

	Urban		Rural	
	Number	Percent	Number	Percent
Winning Facilities	997	91%	715	71%
Losing Facilities	102	9	285	29
Total	1,099	100%	1,000	100%

	Urban	Rural
Total Net Profits	$1,966,366,165	$216,771,581
Average Net Hospital Profit	$1,789,232	$216,772
Net Weighted Profit Margin	16.08%	9.22%
Net Weighted Return on Equity	26.90%	14.76%

DISTRIBUTION SCHEDULE

	No. of Copies
Administrator Health Care Financing Administration	2
Assistant Secretary for Planning and Evaluation	1
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Deputy Assistant Secretary, Finance	1
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Audit Liaison Staff Office of Executive Operations, HCFA	5
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Audit Coordination Division	20
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EDP Audit Division	1
Grants and Internal Systems Audit Division	1
Health Care Financing Audit Division	8
Regional Inspectors General for Audit (8 Regions)	8
Total	61

EXHIBIT R

PROFILE OF WINNING RURAL HOSPITALS

Description	Hospitals Number	Hospitals Percent	Total Profits	Average Profit Per Hospital	Weighted Profit Margin
Teaching Status					
Teaching	14	2%	$32,397,571	$2,314,112	19.45%
Non-Teaching	701	98	217,130,268	309,744	11.99
Total	715	100%	$249,527,839		
				$348,990	12.62%
Tax Status					
Investor-Owned	45	6%	$23,139,329	$514,207	17.87%
Non-Profit	670	94	226,388,510	337,893	12.25
Total	715	100%	$249,527,839		
				$348,990	12.62%
Beds					
400+	4	1%	$19,230,284	$4,807,571	22.58%
250 to 399	29	4	33,992,633	1,172,160	10.97
100 to 249	171	24	103,780,059	606,901	12.13
50 to 99	238	33	62,262,689	261,608	12.35
Under 50	273	38	30,262,174	110,850	13.60
Total	715	100%	$249,527,839		
				$348,990	12.62%

Average Number of Certified Beds 89

Average Medicare Revenue $2,765,476

Uwe E. Reinhardt, Ph.D.

Uwe E. Reinhardt received his Ph.D. in economics from Yale University. He has been on the faculty of Princeton University since 1968, and is currently James Madison Professor of Political Economy. His research interests have centered on health economics. In 1978, he was elected to membership in the National Academy of Sciences' Institute of Medicine. He has served on several governmental task forces on health policy and on several editorial boards including Milbank Memorial Fund Quarterly, Health Affairs, and Journal of Health Economics.

Impact on beneficiaries

Ask a normal human being "How are you?" and you are likely to receive the reply "Fine!"Ask an economist the same question, and the reply is bound to be, "Relative to what?" This is so with perfunctory salutations, and certainly with questions on the impact of the Medicare and Medicaid programs on their beneficiaries. In connection with such questions, one is immediately led to wonder, "Relative to what?"

Those who fought so tenaciously for the two programs during the mid-1960's probably thought of them as logical first steps toward full-blown national health insurance (NHI). Ironically, in retrospect, the two programs may well have deflected American health policy from a path towards national health insurance. With the wisdom of hindsight, the supporters of NHI might now judge these programs as seriously flawed incrementalism, an incrementalism that was just enough to temper the brewing crisis in American health care and divert the Nation's energy from its march towards NHI, but, not enough to free all Americans from anxiety over the financial consequences of illness and grant all Americans access to needed health care on dignified terms.

An argument could thus be made that, relative to a full-fledged NHI program, the Medicare and Medicaid programs actually made millions of the Nation's poor and near poor relatively worse off. This surely must be true of the large number of poor and near-poor Americans who do not now have any health insurance coverage at all, some of whom reportedly are being denied access to health care for want of ability to pay. In its Special Report on this problem, for example, the Robert Wood Johnson Foundation (1983) reported that more than one million families found themselves in that position in 1982. Even the Wall Street Journal (1985), a paper not known for Liberal hysteria, has recently documented cases of gravely ill Americans who have been denied care for lack of insurance coverage and ability to pay. To argue that such families are nevertheless better off than they would be under a national health insurance scheme of, say, the Canadian variety would be to carry ideology to absurd heights.

One can reasonably wonder, however, whether a full-fledged national health insurance program ever has been a realistic option in this country. Quite aside from the Nation's geographic and cultural heterogeneity, its governmental structure—particularly the role interest groups play therein—may well preclude the introduction of so sweeping a social policy as national health insurance. A more realistic baseline from which to judge the Medicare and Medicaid programs may therefore be the situation prevailing prior to 1965. From that baseline, and strictly from the beneficiaries' perspective, one might give the Medicare program the grade of A- and the Medicaid program a plain C, perhaps even a C+.

Whatever shortcomings one may identify in the Medicare program, one would surely not wish to deny that it, along with the entire social security program of which it is a part, has brought about a dramatic improvement in the quality of life of our Nation's senior citizens during the last two decades. As Fuchs (1984) has shown, the average after-tax income per household member of the aged is now about equal to that of the 45-64 years of age group, a fact noted also in the Council of Economic Advisors' *Annual Report* (1985). Before the introduction of Medicare, only one-half of the aged had health insurance, and many of them were quickly driven into indigency when illness struck. Since the onset of Medicare, there has been a substantial increase in the utilization of health services by the aged, most noticeably by the poor aged. If the primary purpose of Medicare has been to bring our aged into the mainstream of American health care, that goal has been reasonably well achieved.

Whether all of the increase in utilization was medically justified can be debated, as can be the precise causal relationship between this increase and the health status of the aged. It is beyond dispute, however, that the increase in utilization has been accompanied by a significant improvement in the health status of the aged, whether one measures it by life expectancy, reductions in age-adjusted death rates, or by age-specific disability days (Fuchs, 1984; and Rogers and Aiken 1984). These improvements in health status are unlikely to have been sheer coincidence.

Yet, unlike the aged in other industrialized societies, our aged still pay for a substantial proportion of their health care out of their own resources. In 1981, for example, Medicare itself covered only about 45 percent of total health care expenditures by the aged. Another 14 percent was picked up by Medicaid, mainly for nursing home care of indigent aged. Fully 36 percent was financed by the aged themselves, either in the form of health insurance premiums or in out-

of-pocket expenditures at point of service. For those aged who did use health services, out-of-pocket expenditures averaged between $500 and $600 that year, an amount that was constant over income classes. As a percent of total per capita health expenditures for the aged, these out-of-pocket expenditures ranged from 20 percent for the poor and near poor to 26 percent for those with high incomes.

It can be argued that there is nothing inherently wicked in requiring such contributions from a group whose average per capita income is close to that of the working population and whose financial responsibilities no longer include the rearing and educating of children. The problem is that the averages mask considerable variance. If one man sits on dry ice and the other on a hot stove they can be said to be, on average, comfortable. Similarly, the fact that, on average, the aged may well be able to absorb 20 or 30 percent of the cost of their health care masks the extraordinary regressivity of this cost sharing. For the poor and near-poor aged, out-of-pocket expenses alone represent an average of 14 percent of their already low incomes. To these outlays must be added the health insurance premiums paid by the aged. Health policy analysts and policymakers, who are young and typically find themselves in the upper 10 percent of the Nation's income distribution,[1] are at a serious disadvantage in imagining just what hardship such out-of-pocket expenditures might wreak among poor aged. That is probably one reason why this problem has persisted to the present.

The considerable financial burden the Medicare program still imposes on some of the poor and sick must be counted as one of its major failures from the beneficiaries' point of view—hence the minus on the grade A. It is also a shortcoming from the viewpoint of every American citizen, for a Nation that allows its aged to be utterly pauperized over illness has an image problem in the rest of the world.

A second major shortcoming is the program's benefit structure. That structure places heavy emphasis upon medical episodes requiring short- to medium-term hospitalization, but it leaves unresolved the problem of protecting the aged against the sustained financial drain of long-term chronic illness. In the short run, a solution to this problem will require additional transfers from the working population to the aged. In the long run, the problem must be solved by goading this Nation to a higher savings ratio, that is, by encouraging or even forcing the current working population to set aside now the resources for their own future long-term care.

In thinking about the challenges faced by Medicare beneficiaries in the future, a distinction obviously must be made between individuals who are now aged or near aged and those who will be aged three to four decades hence.

Those now aged or near aged have few options left to rearrange the financial base for their retirement. To the extent that their assets are inadequate to support their years in retirement, they must seek transfers from younger generations. It seems easy enough to provide a moral foundation for such transfers. After all, generations who experienced the Great Depression, who carried this Nation's flag during World War II, who reconstructed their own country and much of the world they liberated with their sweat and ingenuity, and who, in addition, found it in their heart to bestow upon their children the most generous educational benefits any generation has ever bestowed upon another, can without shame expect that those whom they so endowed now return the favor without rancor. Properly viewed, much of what is now deplored by the working young as the insufferable burden of social security is but a repayment for human capital (education) and physical capital (e.g., the infrastructure) that were financed during the working years by those who are now aged.

The challenge faced by those now aged and near aged is to remind the younger generations of these I.O.U.'s in a manner that does not offend the latter's sense of fairness. It is apparent that, at this time, American voters, both young and old, prefer to shrink or at least to constrain the percentage of the gross national product (GNP) diverted to the public sector. Under these constraints, expenditures for the aged do come, in part, at the expense of the younger poor. Already there is evidence that children represent the most rapidly growing segment of this Nation's poor. Among them are the ever-growing numbers of children born to unwed teenage mothers. To neglect the health care and education of these children would be to mortgage the entire Nation. Trade-offs that divert support from these poor to well-to-do aged are apt to violate the sense of fairness of younger adults, even of those who have traditionally been champions of the aged. To quote economist Victor Fuchs (1984), one of the sagest and most-humane health economists in our midst: "Twenty years ago the plight of the elderly was palpable. Today the most pressing social needs may lie elsewhere. The 'good society' needs to balance its efforts, to make hard choices among many worthwhile objectives."

Therefore, in seeking to redress the current regressivity of the financial burden Medicare imposes on the aged, those who represent the aged in the political arena should not dismiss, out of hand, a redistribution of economic privilege among the aged themselves. That redistribution could be effected in a number of obvious ways. Unfortunately, a discussion of these options (Davis and Rowland, 1984; and Meyer 1984) goes beyond the space limitation of this commentary.

For those who will be Medicare beneficiaries three to four decades hence, that program and social security in its entirety probably represent a social contract that has outlived its usefulness. That contract needs to be renegotiated, and now would be a good time to start the process.

In contrast to the Medicare program, from the viewpoint of its intended beneficiaries, Medicaid

[1]Only about 10 percent of American families had incomes above $50,000 in 1983.

deserves, at best, a mixed review. The ostensible goal of the program was to remove the financial barriers to mainstream American health care for the poor. For some of the poor, that goal has been achieved. Unfortunately, many poor who should, in principle, benefit from the program have been eclipsed by it altogether—hence the relatively low grade C or C+.

During the past two decades, there has been a noticeable increase in the utilization of health services by low-income groups. There has also been a dramatic improvement in the health status of the poor. Surely, the Medicaid program can claim partial credit for this achievement. Furthermore, the average cost of health care per Medicaid recipient is about the same as that of roughly comparable age groups not in the program (Rogers, Blendon, and Moloney, 1982). The program does not appear to be less efficient than the private system, occasional incidents of fraud and abuse notwithstanding.

These groups in particular have benefitted substantially from Medicaid coverage: the elderly poor, mentally retarded, physically disabled and blind, and children in low-income, single-parent families. Unfortunately, as Joe, Meltzer, and Yu (1985) so vividly illustrate in their recent paper on Medicaid, eligibility for the program varies considerably and seemingly capriciously from State to State, and there are arbitrary, illogical exclusions even within States.

Overall, in 1985, the Medicaid program covered less than one-half of the families defined as poor and near poor (near poor is defined as an income of $12,722 or less for a family of four). Although some of these families may be covered by employer-paid health insurance, between 25 and 35 million people in this country are without any health insurance coverage. This lack of insurance coverage is not confined strictly to the poor, but it is concentrated within the lower-income strata.

During the 1970's, uninsured poor individuals requiring acute care could usually obtain it, because the cost of that care could be shifted to paying patients. As the Nation moves from passive, retrospective, full-cost reimbursement of hospitals to cost-conscious, price-competitive purchasing of care, these hidden cross-subsidies will be squeezed out of the system like water out of a sponge. The major challenge facing the actual and originally intended beneficiaries of the Medicaid program will be to weather that transition until, at long last, the Nation sees fit to put into place a more coherent, comprehensive program covering all of the Nation's low-income families.

Impact on health care providers

In their original design, the Medicare and Medicaid programs were conceived of essentially as adaptations to a larger, private health care market. That was one of the key decisions shaping the development of these programs. A second key decision was acceptance of the principle that patients covered by the programs must have free choice among providers. That principle made it virtually impossible for the Government to act as a "prudent purchaser," that is, to seek low prices by playing off one provider against the other. From the perspective of providers, these two decisions fashioned a supplier's dream world.

Practically, the first decision meant that institutions were to be reimbursed on a retrospective, full-cost basis, with only minor constraints on the definition of costs, and that for-profit institutions were to be granted a guaranteed rate of return on the proportion of their equity allocable to Medicare patients. Under the Medicare programs, physicians were to be paid their "customary" fees, if the latter were judged "reasonable" within the pattern of fees "prevailing" in the physicians' market area. Because the specific design of the Medicaid program was left to the States, the Medicare reimbursement formulas could not be imposed upon that program, although many States adopted these methods for their Medicaid programs as well.

It is tempting, in retrospect, to criticize the architects of the two programs for these crucial design parameters, but that would be unfair. First, within the politics of the mid-1960's, these parameters were the price for acceptance of the programs by health care providers. Second, it may not have been foreseen at the time just how dominant the two programs would become in the financing of American health care.

Unfortunately, the "market" to which the two programs sought to adapt themselves was one dominated by a private insurance industry that was itself too splintered to confront the providers of health care with effective countervailing market power, short of violating the antifrust laws. By adapting themselves to this context, the Medicare and Medicaid programs became, for the most part, just one more structurally impotent payer in the health care market.

The principle of "divide and conquer" operating in the market for health services during the past two decades has bestowed truly generous cash flows upon the providers of health care. If the American health care sector today is truly the world's best, as is so often claimed, the credit goes not only to the Nation's well-trained physicians, but also to the taxpayers and patients who have financed for these professionals abundant physical resources with which to ply their trade. Furthermore, our Nation has shown its gratitude by granting the owners of these resources high monetary rewards per unit of resource (e.g., per physician hour, per band-aid, per pill).

It is widely appreciated that lavishing material comforts on children, while failing to discipline them, can lead to turbulent adjustment problems during adolescence. Unfortunately, what is true of children is also true of entire economic sectors, where munificent rewards and a lack of market discipline can foster much untoward behavior. There is now general agreement that our health care sector has suffered this fate. As the health care market shifts from past reimbursement practices toward cost-conscious,

price-competitive, "prudent" purchasing, that sector exhibits all of the symptoms of a spoiled adolescent. There is posturing all around over threats to the "quality of care". There is lamenting over declining incomes. There is pouting aplenty, for example, the threat that the Medicare fee-freeze will lead to "two-tier" health care for the aged, or the practice of 'dumping' patients in response to prospective payments (a practice that gained momentum during 1984, as the hospital industry celebrated its highest profit margins in years!)

The point of the preceding analogy is not to offend. On the contrary, it is intended to remind us that, just as one cannot fairly blame spoiled adolescents for their tantrums, so we should refrain from casting aspersions on the character of our health care providers. By granting them, without so much as an argument, a license to take from our collective insurance treasuries virtually as they pleased, we have educated them to a way of life, and to expectations, from which they can be weaned only gradually, and from which they should be weaned gently and with patience.

Indeed, something more can be said on behalf of our providers. For all we know, certain ethical constraints induced the providers from taking less than they might have. To gain perspective on the issue, one need merely imagine what other actors in our economy would have taken under similar circumstances. Clues can be had by beholding the comportment of our defense industry, and one wonders what investment bankers or the legal profession might have done with such a license.

Now facing the providers of health care is the challenge to adapt to the newly emerging market environment without compromising the ethical standards that lie at the heart of a good health care system. As the choreographers of the system, physicians have a central role to play in this adjustment. The next decade or so will show how faithfully the medical profession will uphold its code of ethics under fiscal siege.

Among the adjustments providers must make in the years ahead is acceptance of the laws of supply and demand. Throughout the past two decades, our providers fought Government regulation with appeals to the putative virtues of a free market. That posture was cheap and easy as long as supply was relatively taut. It is severely tested when there is excess supply. There is now agreement that the Nation has an abundance—if not an outright surplus—of physicians and a glut of acute-care hospital beds. A challenge facing providers is to accommodate to the notion that the purchasers of health care will seek to exploit this surplus to their own economic advantage and that, within a market economy, that form of exploitation is entirely legitimate. Concretely, this will mean that providers must ready themselves to bargain hard with the Government over compensation levels. Alternatively, providers must learn to accept whatever compensation the market permits the Government to impose upon them. Third-party payers, be they private or public, would be derelict in their fiduciary roles if they failed to exploit their new-found market power. It is too late to decry such efforts as "unfair."

Impact on the government

In 1965, Americans spent 6.1 percent of their gross national product on health, of which 26 percent was paid with government funds. By 1983, the Nation spent 10.8 percent of its GNP on health, and 42 percent of that total was paid with government funds. In 1965, State and local governments devoted about 8 percent of their budgets to health care; by 1983, that percentage had risen to about 14. The corresponding figures for the Federal Government are 4.5 and 12.5 percent, respectively. The government sector is now the predominant purchaser of health services in this country, and health care represents one of that sector's major outlays. Because every dollar of health care expenditure represents a dollar of health care income for some providers, we may also say that government today is one of the major suppliers of health care incomes in the Nation.

For the most part, the increased role played by the Government in health care reflects the Nation's decision, in the mid 1960's, to have the Government take on responsibility for the health care of the aged and the poor. To the extent that voters participate in such decisions at all, it was their choice. As was noted earlier, however, a part of the increase can be attributed also to the design parameters of the Medicare and Medicaid programs. These parameters literally entrusted providers with keys to the public treasury.

Private payers and the providers of health care have lamented for years that the Government has not picked up its fair share of the national health care bill, by refusing to pay for bad debts, charity care, and other exclusions from allowable costs, Government has effectively shifted costs to the private sector. One could, however, construct an alternative scenario. Over the 2-year period 1980-82, for example, real (inflation-adjusted) total national health expenditures grew by 12.7 percent. Total real outlays under the Medicare program, on the other hand, grew by 27.9 percent. Medicare outlays on physician services grew even faster, by 30.9 percent (Freeland and Schendler, 1984). It would be difficult to argue that these figures resulted from a growth in the number of the aged or changes in their morbidity. Therefore, the thought occurs that providers found it relatively easier in those 2 years to cull added health care incomes from the public sector than from the private sector—that we were witnessing cost-shifting in reverse.

The apparent ability of providers to effect such shifts raises the question of how Government, hard pressed by voters to control its budgets, might control its outlays on health care. One approach, taken virtually everywhere else in the industrialized world, would be to control overall national health care expenditures along with the Government's share of

that total. That approach is taken by other societies to discourage the emergence of two-tier health care systems. Unfortunately, nonarbitrary criteria do not exist for setting the overall percentage of the Nation's GNP that should go to health care. Furthermore, it is virtually impossible to enforce whatever limit is chosen in the absence of a full-fledged national health insurance system.

For reasons already indicated, Government control over the entire health care sector is out of the question in the United States. On the other hand, the Government can no longer afford the pretense that Medicare and Medicaid programs are mere appendages of the American health care market. In many areas these programs dominate that market. It was therefore inevitable that the two programs would eventually go their own way. Prospective compensation of hospitals by diagnosis-related groups is the first step in that direction. Fee schedules of some sort for physicians is apt to be the second step. As already mentioned, unless health care providers quickly learn to negotiate such compensation levels with the Government, a further logical step will be competitively bid compensation levels, effected either through health maintenance organizations or preferred provider organizations. Although a march in this direction will surely elicit from providers cries of "two-tier" health care, it is hard to think of an alternative approach to budgetary control at this time. In a real sense, it is the approach providers asked for during the health policy debates of the 1970's.

A case can be made that control over public health budgets is far from compelling in the first place, because the United States has one of the smallest public sectors in the industrialized world (Japan being the sole exception). Most other industrialized nations spend between 40 and 50 percent of their GNP on the public sector, but the comparable American figure lies between only 33 and 35 percent. Such an argument, however, carries little political weight at this time. For better or for worse, American voters, both young and old, rich and poor, now wish to see their public sector severely constrained. And, as already noted, there are other priorities with legitimate claims on public funds.

There is one challenge American voters might put to health care providers before voting additional allocations for health care. Neighboring Canada currently spends a little more than 8 percent of its GNP on health care. With that allocation, it has freed every Canadian citizen from anxiety over the financial cost of illness and granted every citizen access to a common health care system. By contrast, the United States is already spending close to 11 percent of its GNP on health care without, however, guaranteeing every American citizen freedom from worry over health care bills and financial access to health care. An allocation of 11 percent of the GNP is not skimpy; it represents a generous supply of health care incomes. The challenge faced by American health care providers is to convince American voters that, relative to the quality of Canadian health care, the quality of American health care is sufficiently superior to warrant an extra 3 percentage points or so of the GNP (and even more) along with the financial distress still suffered by many American patients. It is an interesting challenge, worthy of careful research.

Implications for the future

Throughout the industrialized world, nations are wrestling with the economic implications of an aging population. Many of the European nations already have attained today the top-heavy population pyramid the United States will attain in the early part of the next century. Japan's population pyramid, too, is now rapidly shifting towards the European pattern. These demographic shifts will create intergenerational tension everywhere. The United States by no means stands alone in this struggle.

Every nation, too, has its group of economically disenfranchised citizens who cannot afford to pay fully for what are considered to be the basic necessities of life. How a nation copes with the economic problem presented by its aged and its poor depends only weakly on its overall economic strength. Much more decisive is the amorphous something called a "shared social ethic." Nations differ quite substantially in terms of their dominant social ethic and, also, in the degree to which that dominant ethic is actually shared.

To illustrate, consider the following concise statement by the Government of Canada (1983) on the social ethic governing the distribution of health care in that country:

> "The Government of Canada believes that a civilized and wealthy nation, such as [Canada], should not make the sick bear the financial burden of health care. Everyone benefits from the security and peace of mind that comes with having prepaid insurance. The misfortune of illness, which at some time touches each of us, is burden enough: the cost of care should be borne by society as a whole."

Whatever reaction to this statement one's own ideology may trigger, the statement is a crisp definition of a social ethic, and one that seems widely shared by Canadians of all political stripes. Consistent with that definition, Canada maintains a universal health insurance system financed not through actuarially sound insurance premiums, but through a tax system based on ability to pay.

Most of the European systems have adopted a similar approach. To be sure, all of these nations agonize over the enormous expense of their systems, which absorb anywhere from 6 to 10 percent of their gross national product. But the public debate over health policy in these countries does not take place through special conferences on "financing health care for the aged," or "financing indigent care." These problems have been completely folded into the problem of one health insurance and health care

system imposed on virtually all economic strata of society.[1]

The imposition of one highly regulated health care system upon all members of society inevitably carries with it certain hidden costs, among them loss of the innovative drive of looser systems such as ours, not to mention the frustration that providers suffer over their loss of certain freedoms. Be that as it may, this symposium is not the proper forum to criticize foreign systems nor to advocate them. The reason for describing them briefly here is simply to make an important point, namely, that in terms of strategy and tactics the lessons from health systems in other countries are rather meager, because their approaches are based upon a social ethic that we do not seem to share.

As argued elsewhere (Reinhardt, 1985), it would be difficult for an American to describe to foreigners the social ethic driving American health care, even if an entire page were set aside for that purpose. To be sure, many Americans hold crisp and fully coherent views of their own on this matter. The problem is that these views vary widely among individuals; there does not seem to be a lasting set of ethical precepts that are widely shared. We lack an accepted blueprint on ethics against which to assess alternative strategies for the Medicare and Medicaid programs. Without such a consensus, it is nearly impossible for a policy analyst to render expert advice on the issue without incorporating his or her own ideological predisposition.[2] Rather than proffering such advice, it may therefore be more productive to raise the following fundamental questions:

- Is health care to be viewed primarily as a basic, private consumption good (such as food, clothes, and shelter), or should one view it as primarily a public good, a community service (such as elementary and secondary education)?
- Is access to at least a basic set of health services the right (that is, a basic entitlement) of every American citizen, or is there merely the presumption of a moral obligation on the part of providers to facilitate access to basic health services?
- Even if access to basic health care was deemed a right, should the definition of that right, and responsibility for enforcing it, be the prerogative of State and local governments, or is that the proper responsibility of the Federal Government—that is, should there be nationally defined and nationally enforced standards?

Anyone who has followed our debate on national health policy during the past 20 years must conclude that no clear answers to these questions have emerged. And yet, these fundamental questions lie at the heart of the broader question on what direction the Nation should take with regard to the Medicare and Medicaid programs.

Consider, for example, the first question. To hold that health care is essentially a basic, private consumption good implies that the financing of health care is primarily the responsibility of the individual recipient of that care, although society may well see fit to assist poor individuals financially to gain access to at least a basic set of health services. Our society adopts that view in connection with certain essential commodities, such as food, shelter, and clothing. In the literature, that view is sometimes referred to as the "basic-needs" approach.

The basic-needs approach clearly countenances a two- or multiple-tier health care system, just as we countenance it for food, shelter, and clothing, and even for higher education and jurisprudence, if not de jure, then at least de facto. On that perception of health care, the Medicare program must be judged ill-conceived from the start, for it offers too much to the upper income strata and perhaps not enough to the poorest among the aged. For example, adherents to the basic-needs approach would not deem it essential to offer Medicare beneficiaries complete freedom of choice among providers. Furthermore, it would be deemed quite acceptable to permit well-to-do aged complete freedom of choice (financed, of course, with their own resources), a privilege not made available to their poorer peers.

Under the basic needs approach, it would make sense eventually to fold the Medicare program into governmentally encouraged (or even mandated) life-cycle planning on the part of individuals. Individuals could be encouraged through the tax code (or mandated) to contribute during their worklife stipulated minimum annual payments into individually owned accounts established specifically to finance health and long-term care during retirement. The accounts could be held in the private sector, albeit under public supervision. The Medicare program itself would then convert to essentially a means-tested welfare program, making transfers to individuals only if the funds accumulated during their worklife proved inadequate. Clearly, such an approach would represent a sharp departure from the social ethics originally packaged into the Medicare program, but it would be fully consistent with a basic-needs approach to health care.

Readers may be surprised to see the second question raised at all. It may be thought that this issue had been settled long ago when this Nation subscribed to the much-mouthed political slogan that "health care is a basic right." The mouthing of slogans, however, do not make a "right." Legislating it might. If one surveys the practice of health care in our realm, and

[1] In every one of these nations, there is a small private sector that serves as an escape valve for patients to pay for speedier treatments or treatments as private patients. Usually, much less than 10 percent of the population is privately insured, even in the United Kingdom.

[2] As an immigrant from, first, West Germany and then Canada, and as an erstwhile pauper, I am favorably disposed towards national health insurance systems that offer middle- to low-income families a dignified and anxiety-free health care experience. As a long-time student of the American health care sector, however, I have come to doubt that national health insurance is compatible with the American ethos and, especially, with the political process in this country. For the poor in this country, the most humane, politically feasible system would probably be a multi-track system with a bottom tier served primarily by health maintenance organizations.

even the literature on the subject (Blumstein, 1984), one must conclude that the second question is still a relevant issue.

Consider, finally, the third question that can be rephrased as follows: Should residents in State X be at all concerned over the economic and physical welfare of fellow Americans in State Y, or is that none of their business?

If the answer is, "Yes, residents of State X should be concerned with the welfare of fellow Americans in State Y, and not only when the latter are trapped somewhere abroad," then it would follow that there should be national standards for basic health care; the definition of a basic right to health care and the responsibility for enforcing that right cannot be left fully to the devices of individual States. If that be the dominant social ethic on this point, then the Medicaid program must be judged as ill-conceived and poorly executed.

On the other hand, if the dominant social ethic dictates the answer, "No, the health care experience of residents in State Y is not the business of residents in State X," then the Medicaid program in its present guise makes perfect sense, but the Medicare program becomes suspect. After all, it would reflect a contorted social ethic to state that we should practice nationhood in health care only with respect to people 65 years of age and over, but not with respect to children or middle-aged fellow Americans.

To speculate on the future course of Medicare and Medicaid is to speculate on the dominant answers to the three fundamental questions raised above. If bets had to be made on these answers at this time, it would seem reasonable to place one's marbles as follows:

- Health care is essentially a basic, private consumption good, and we shall countenance two- or multi-tier health care.
- Access to basic health care is not an entitlement, but merely a moral obligation imposed on providers and financed, indirectly, by various formal or informal cross-subsidies.
- The provision of access to health care is a State and local, not a Federal, matter.

Whether the Medicare program can ultimately be made consistent with these tenets—they imply, at the least, the conversion of Medicare into a means-tested program—remains to be seen. Indeed, in the end these tenets may not win out after all. Occasionally, even economists have been wrong in their predictions.

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HEALTHCARE FINANCIAL MANAGEMENT ASSOCIATION

Definition and Financing of Uncompensated Services

Exposure Draft
April 5, 1985

This exposure draft of a proposed position statement has been prepared by HFMA's Task Force on Uncompensated Services. It is issued for comment by all interested parties. After consideration of comments received, HFMA intends to prepare and distribute a position statement on this subject. **This exposure draft does not represent a position of HFMA.** Responses are requested. Comments should be submitted, in writing, to be received by June 5, 1985 and addressed to:

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6. The amount of uncompensated services is the full economic cost of providing these services.

7. Use of available sources of funds to finance payment shortfalls limits funds available for financing uncompensated services.

8. Rate regulation designed to assure adequate payment for continued operation is not generally applied to institutional healthcare providers.

9. All-payers systems are undesirable or inappropriate in many, if not most, circumstances.

10. Provision of extraordinary services to persons who have inadequate financial resources requires payment by the public sector or group promising the benefits.

11. Uncompensated services resulting from unavailability of third-party coverage should be paid for from public funds.

12. A reasonable amount of service to persons unable to pay should be financed as a part of payment rates by all payers.

13. Bad debts should be a general responsibility of all payers.

stores; nor rent subsidies only on landlords. The financing source for a disproportionate share should be broad-based (it is inappropriate to tax insurance companies but not Medicare, for example) and should be limited to the market area where the disproportionate share occurs.

SUMMARY

1. Uncompensated services are charity care and services that result in bad debts.

2. Charity care is provided to patients who are unable to pay.

3. Bad debts result from providing services to persons able to pay, but who do not pay.

4. If designated payment from any source is made for specified services, then that portion of the services is not uncompensated.

5. If an institutional healthcare provider provides service for a specified level of compensation, any difference between charges and the amount of compensation is not uncompensated services.

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14. Disproportionate share must not result from provision of needlessly costly or unnecessary services or lax collection efforts.

15. A "disproportionate share" should only be a problem for those institutional healthcare providers that are in a competitive situation and should be resolved within the market where price competition occurs.

16. A solution to a disproportionate share problem should be designed by the institutional healthcare providers in the area.

17. It is not appropriate to tax institutional healthcare providers to finance payment to the provider of a disproportionate share of uncompensated services.

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